Ghost-Seeing. By Dr. Andrew Wilson. See page 114.

Woman's Place in Nature. See page 119.

BOSTON MEDICAL LIBRARY IN THE

HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

"Reason's whole pleasure—all the joys of sense—
Lie in three words, Health, Peace, and Competence."—*Pope.*

EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

Vol. XIII.—No. 320. FRIDAY, MAY 24, 1889. [Price Twopence.

ROWNTREE'S

"ELECT" COCOA.

Characterized by PURITY, EXTRA-ORDINARY STRENGTH and DELICACY of FLAVOUR.

Is very ECONOMICAL, as 1 lb. will make over 120 cups of most DELICIOUS COCOA.

Highly commended by the *Lancet*, *British Medical Journal*, *Medical Press*, *Medical Record*, *Hospital Gazette*, *Illustrated Medical News*, and other influential organs; also, by many of the Faculty, and Drs. Hassall and Clayton, and other analysts.

YORK, ENGLAND.

SPECIAL NOTICE.

INMAN'S COMPOUND SYRUP OF THE HYPOPHOSPHITES.

A Tonic Syrup of wonderful Strengthening and Invigorating Properties.

INMAN'S SYRUP is composed of the Hypophosphites of Lime, Iron, Soda, and Potash, and valuable Tonic Alkaloids, combined so as to be readily assimilated by the Human System. It is a safe and sure Remedy for Nervous Prostration and General Debility, whether the result of Overwork, Mental Anxiety, or Excesses. There is no Medicine that has a more beneficial action upon a debilitated constitution. It stimulates, strengthens, and invigorates the system, and effectually removes the distressing feelings of Nervous Exhaustion. It is suited to both sexes and to all ages. For Delicate Females, and particularly those suffering from impoverished blood, it is invaluable.

Health says:—"We find it to be an excellent preparation, containing all the necessary constituents for that restoration of Nervous Strength which is so essential to the successful treatment of Wasting or Debilitating Diseases. The curative properties of the Hypophosphites in affections of the Respiratory Organs have been permanently established, and in all forms of Nervous Debility their action is marked and certain. The admirable Tonic nature of this Syrup has long been recognized by the Medical Profession, and we can confidently recommend it as a Powerful Invigorator of the Nervous System."

Sold in bottles at 2s. 6d. and 4s. 6d. (post free), and the Proprietors are willing to send a Sample Bottle to any one sending Three Stamps to cover cost of postage.

London Agents: BUTLER & CRISPE; TAYLOR'S DRUG COMPANY; F. NEWBERY & SONS.

Proprietors: WILLIAM INMAN & CO. (LIMITED), The London Drug Stores, 8, Shandwick-place, and 46, Leith-street, EDINBURGH.

SCHWEITZER'S

COCOATINA.

GUARANTEED PURE SOLUBLE COCOA.

This Old-Established Article retains its position as "the finest Cocoa in the Market." It is unequalled in purity and flavour, and is very Economical. It will bear the strictest Chemical test, and keeps for years in all Climates.

45, FARRINGDON-STREET, LONDON, E.C.

"OLEUM DEELINAE," For the Skin and Complexion.

"OLEUM DEELINAE," For Eczema, Scurvy, Ringworm, Piles.

"OLEUM DEELINAE," For Irritation of any kind.

"SALVO PETROLIA," Genuine Petroleum Jelly.

"SALVO PETROLIA," Superior to Vaseline.

"SALVO PETROLIA," Finest Emollient known.

TO BE HAD OF ALL CHEMISTS AND DRUGGISTS IN THE WORLD.

Manufactured solely by the Proprietors,

THE DEE OIL COMPANY, LIMITED,

WORKS—SALTNEY, CHESTER, ENGLAND.

Nos. 1-156 (excepting Nos. 29, 30, 38 and 39) may still be had, price 4d. each.
Nos. 157 (excepting Nos. 245 and 272) to date, price 2d. each.

[Indexes to Vols. II., VI., VII., VIII., IX., X., XI., XII. can be had, price 2d. each.

THE

NEBULIZER

(BY ROYAL LETTERS PATENT.)

BY THE AID of this Invention any liquid remedy can be instantaneously converted into a nebula or vapour so extremely delicate and dry that it remains suspended in the air like smoke or fog, and can be inhaled into the lungs as readily as the air itself. This process of transformation is accomplished by simple mechanical means, and does not change in the least degree the nature or strength of the remedy employed.

From the very beginning of the inhalations of appropriate remedies in a nebulized form the breathing becomes easier, expectoration is promoted, the bronchial tubes become free, patients are able to lie down and sleep quietly, and in time a permanent cure is effected. Patients suffering for thirty years and more from asthma in its most distressing form have in this way been entirely and permanently cured after hope had been abandoned.

Successfully used in cases of—

DIPHTHERIA.	HAY ASTHMA.
CROUP.	CHRONIC BRONCHITIS.
PHTHISIS.	CATARRH.
CHRONIC RHINORRHEA.	ASTHMA.

LENCORRHŒA, &c.

Members of the Medical Profession are cordially invited to investigate this highly useful invention.

Sold complete, with twelve recipes gathered from the practice of eminent Physicians, at 10s. 6d. each, by

A. E. HOLT (Sole Proprietor),

74, FLEET-STREET, LONDON, E.C.

Descriptive Circulars free on application.

MARINE HOTEL,

NORTH BERWICK, N.B.

(Twenty-two Miles from Edinburgh.)

FAMOUS SUMMER RESORT. Splendid Golfing Green. Sea Bathing. Sea Fishing, Boating, &c. Charming Excursions to the Bass Rock, Tantallon, and numerous Castles and Seats, and the well-known Links are a most delightful Promenade.

One of the finest Hotels in Scotland. Private Grounds; unrivalled Views; extensive system of Baths—fresh and salt water. *Cuisine* is well known for its uniform excellence. Table d'Hôte at separate tables, from 6.30 to 8.30. Post and Telegraph Office in the Hotel.

A. L. VOGEL, Manager,

And Proprietor of the New Hotel Splendide and Albemarle, Piccadilly, London.

ROWLAND'S

ODONTO

Known for sixty years to be the best and purest Tooth Powder, as it contains no acid or gritty substances, which ruin the Teeth and produce premature decay; it

WHITENS the TEETH

prevents and arrests decay, strengthens the gums, and gives a pleasing fragrance to the breath. The genuine ODONTO is ROWLAND'S of

20, HATTON-GARDEN, LONDON.

TRELOAR'S

CHEVIOT CARPETS

Are made and kept in Stock in the following Sizes, in all Colourings,

ALL WOOL, FRINGED, AND BORDERED:—

SIZE.				PRICE.		
9 ft. 0 in. by	7 ft. 0 in.	...	...	£1	1	0
9 ft. 3 in. ,,	8 ft. 3 in.	...	...	1	5	6
10 ft. 3 in. ,,	8 ft. 3 in.	...	...	1	8	0
10 ft. 9 in. ,,	9 ft. 9 in.	...	...	1	16	0
11 ft. 3 in. ,,	8 ft. 3 in.	...	...	1	14	6
11 ft. 9 in. ,,	9 ft. 9 in.	...	...	1	18	0
12 ft. 9 in. ,,	9 ft. 9 in.	...	...	2	2	0
12 ft. 9 in. ,,	11 ft. 3 in.	...	...	2	8	0
13 ft. 3 in. ,,	11 ft. 3 in.	...	...	2	10	0
14 ft. 3 in. ,,	11 ft. 3 in.	...	..	2	14	0

And in other sizes. ALL WOOL.

AVOID IMITATIONS MADE WITH A MIXTURE OF COTTON.

The QUEEN says:—"The writer of this note had a year's experience of Cheviot Carpets, and finding them wear and look well, has every reason to be satisfied."

CHEVIOT CARPETS

CAN BE OBTAINED ONLY FROM

TRELOAR & SONS,

68, 69 & 70, LUDGATE-HILL, LONDON.

A Catalogue of all the best Floor-Coverings post free.

ESTABLISHED 1832.—ELEVEN PRIZE MEDALS.

GOUT,

RHEUMATISM, SCIATICA, & GOUTY ECZEMA,

DRINK

PITKEATHLY cum LITHIA,

The only Rational Treatment in Use.

The combination of Pitkeathly with Lithia prevents an undue formation of Urates in the system, maintains the digestive and assimilative organs in a condition of healthy activity, and promotes the elimination of Urates by the kidneys, especially if, at any time, there appears to be a tendency to their accumulation in the body.

Sold by Chemists, Mineral Water Dealers, and Wine Merchants.

Sole Proprietors: REID & DONALD, PERTH.

London Agents:

BEST & SONS, 22, HENRIETTA-STREET, CAVENDISH-SQUARE, W.

REMINGTON

STANDARD TYPEWRITER.

STILL AHEAD! SPEED CONTESTS.

CINCINNATI, July 25—Highest Speed on Legal Testimony.

NEW YORK, August 1—**First, Second, Third, and Fourth Prizes** on Business Correspondence.

TORONTO, August 13 (Tournament for CHAMPIONSHIP of the WORLD).

GOLD AND SILVER MEDALS for Highest Speed ever recorded on Business Correspondence and Legal Testimony—99 Words per Minute, excluding errors.

Sole Proprietors and Manufacturers—

WYCKOFF, SEAMANS, & BENEDICT,

100, GRACECHURCH-STREET, E.C.

◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, MAY* 24, 1889.

CONTENTS OF No. 320.

	PAGE
Notes by the Way: By the Editor.	113
Original Essays:—	
The Science of Ghost-Seeing. By Dr. Andrew Wilson	114
The Law of Health as it Affects our Homes. By J. Ridley Shield. Fourth Paper	116
Personal Health:—	
Diarrhœal Diseases	118
About the Bath	118
The Family Circle:—	
Woman's Place in Nature	119
Brains and Stomachs	120
Popular Science Papers:—	
The Shady Side of Brain Work. Sixth Paper. The Psychology of Spiritualism. By Joseph Jastrow	120
Public Health:—	
The Importance of Sanitary Inspection	122
Jottings from the Journals:—	
Scarlet Fever — Shop-window Cures	123-124
Sanitary Appliances, &c.:—	
The Patent Nebulizer	125
IMPORTANT ANNOUNCEMENT	125
Our Letter Box:—	
Rules for Correspondents	126
Queries and Answers:—Replies: General, Sanitary, and Medical	126

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

DR. A. G. AULD, of Glasgow, remarking in the *Lancet* on certain effects of tobacco smoking, says that the practice of tobacco smoking is so general amongst the male sex that it is very commonly overlooked in computing the causes of disease. And this seems somewhat strange when it is considered that one of the most virulent known poisons should be continually at work in the system—a poison, moreover, whose physiological reactions have never been accurately determined. A vast number doubtless tolerate the poison well; by a goodly number tolerance is less easily acquired—that is to say, it is acquired at greater expense to the system; whilst there are others by whom tolerance is almost impossible of attainment. "It is my growing impression," says Dr. Auld, "that tobacco is responsible for a variety of functional derangements which there is no reason to aver cannot terminate in organic disease. Some of these are already well known, and easy of detection to their true source; but there are others less so, and it is my present object to notify two of them.

"THE first," says Dr. Auld, "is albuminuria—that is, excessive excretion of albumen by the kidneys. Since the routine examination of the urine by careful chemical testing has come more into vogue, small quantities of albumen are frequently detected in the urine of apparently healthy persons. Having systematically examined the urine in hundreds of cases for a number of years, I am convinced that the slightest trace of albumen in the urine is pathological. It is, however, frequently induced by preventible causes, and one of these is chronic poisoning by nicotine. I do not observe any mention of tobacco smoking in this connection in Dr. Grainger Stewart's work on Albuminuria, or, indeed, in any other writings on this subject; but I have certainly traced the disorder in a few cases entirely, and in others partially, to the habit in question.

✣ ✣ ✣

"THE other affection," Dr. Auld remarks, "pertains to the neuro-muscular system. It consists in localised fibrillary twitchings, something similar to what is observed in progressive muscular atrophy, and perfectly distinct from tremor. Charcot states that a similar phenomenon is occasionally found in hypochondriasis. The twitchings are often excessive, and occur most frequently about the trunk and upper arms. Besides its action on the centres, it is probable that the poison acts directly on the nerve ends in the muscles, as it is found that when tetanus of the inspiratory muscles succeeds to nicotine poisoning, section of the vagi is ineffectual to prevent it. According to Kölliker, the muscular irritability remains unaffected by nicotine. It remains to say that when such symptoms as the above are found in association with tobacco smoking, it will not suffice merely to indulge less in the practice. To effect a cure, tobacco in every shape must be entirely dispensed with. It is unsuited to the constitution, and abolition should be permanent."

✣ ✣ ✣

A CORRESPONDENT of a medical journal gives a test for the freshness of eggs. He says, "I have lately observed that when a perfectly fresh egg is placed to one's ear and violently agitated no sound is elicited; but, on the other hand, if the egg is at all stale, a knocking sound is heard, as if the contents were not sufficient to fill the shell. The staler the egg the greater is the oscillation and the sound generated. The test will be found to be an infallible one, as I have tried it in all instances lately, and now depend on it in the selection of eggs."

✣ ✣ ✣

DR. HARRY CAMPBELL, writing on the Ventilation of Public Libraries, says rightly that, "A library needs

"THE TASTELESS APERIENT."

HUNGARIAN NATURAL MINERAL WATER.

The Salts of ÆSCULAP contain 90 per cent. of purgatives.

Æsculap

HIGHEST AWARD AT THE INTERNATIONAL MEDICAL EXHIBITION, London, 1881.

"This Water contains the SULPHATES OF MAGNESIUM AND SODIUM in unusually large quantities. IT IS AN ADMIRABLE APERIENT WATER—one of the most powerful, indeed, that we have examined, and may be used with perfect confidence."—THE LANCET, *Sept. 26th*, 1885.

SOLE AGENTS:

INGRAM & ROYLE, London, Liverpool, & Bristol.

AND OF ALL CHEMISTS.

quite as much ventilation as a bedroom. The porous books absorb the impurities of the atmosphere as a sponge absorbs water. Piles of books, moreover, afford a multitude of crevices and crannies where impure air can stagnate. A banquet was held in one of our large libraries a little while ago; and although the windows were subsequently kept open day and night, I could detect what I may term the 'the dinner smell' in this library for more than a week afterwards. So impure is the air in the library of the British Museum, and so serious its effect upon myself, that I am practically debarred from reading there. On the other hand, at the College of Surgeons' library I can read for hours together without discomfort.

✣ ✣ ✣

But on one occasion I noticed at this library exactly the same ill effects as I always experience when reading at the British Museum; and on mentioning the fact to one of the attendants, he frankly acknowledged that the opening of the windows had, through oversight, been somewhat neglected. Here we have a positive proof, if such be needed, that the evil effects of which I have spoken are due to imperfect ventilation. It is, however, not for myself that I am writing, but on behalf of the intellectually toiling multitude who daily congregate under the great dome, and most of whom earn a slender livelihood by literary hack work. Theirs is no mere mechanical work. It is a work of thought; a work of brains. How can we expect this wonderful organ to carry on its functions aright when it is soaked in an impure plasma? And how can the blood plasma of a man be otherwise than impure if he spends many hours together in an impure atmosphere? It is not from the poisonous exhalations of the body that the subtle essence of thought can be distilled."

✣ ✣ ✣

I see that Dr. Carnet has experimented with the dust obtained from the walls and floors of various dwellings in which consumptive patients have lived. He inoculated guinea-pigs with it, and carefully excluded all possibility of infection from outside sources. In this way twenty-one rooms of seven Berlin hospitals were examined, and the bacilli, or germs, of consumption found to have been present in the dust from most of them. Positive results were also obtained with the dust from insane asylums and penitentiaries. The dwellings of fifty-three consumptive patients were investigated in the same way, and the dust in the neighbourhood of twenty patients found to be disease-producing. It was the case, with absolute regularity, that the dust was always virulent when the patient had been in the habit of spitting on the floor, or in a handkerchief, while it was never so when a spit-cup had been employed.

✣ ✣ ✣

Mr. John Hudson, writing in a medical contemporary, gives a useful hint regarding snoring. He says snorers should sleep on the right side, almost on the stomach; place the right hand firmly well on the left shoulder; put the bed-clothes over the hand, but under the chin; place the left hand slightly under the upper part of the right arm, to keep the right hand in its place. The idea is to support the chin, so that the mouth will remain closed. The patient may sleep on the left side, but then the arms and hands must be reversed. This simple advice is well worth a trial by those who disturb others and themselves by nasal performances in the watches of the night.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE SCIENCE OF GHOST-SEEING.

By Dr. Andrew Wilson.

In dealing with "ghost-seeing" from the physiologist's point of view, it has been usual to explain this incident by assuming that a sensation of sight has been reversed. In other words, that this sensation passing outwards *to* the eye *from* the brain, instead of from the eye to the organ of mind, gives rise to the idea of an outside object which has really no existence at all external to the beholder. When we see an object naturally, the image is received by the retina or nervous network of the eye, and is transferred thence to the brain. Seeing is thus in reality a brain-act, and not a mere function beginning and ending with the eye, which is a mere "gateway of knowledge." Now, if we suppose that the brain can project the images or memories of things seen, forwards and outwards, so as to produce on the eye much the same effect as if the images were actually received by that organ, a hallucination or illusion of sight is thereby produced.

This is the scientific explanation of ghost-seeing. To make our meaning clear, let us briefly consider what takes place in ordinary sensation, when we see or hear the objects and sounds of every-day existence. The eye, alighting on an object, transfers, as we have seen, an impression of that object to the brain through the special or optic nerve of sight, which leads from the eye to the part of the brain exercising the sense of sight. We in reality do not see with the eye. That organ is merely an arrangement of lenses adapted to receive, focus, and otherwise adjust rays of light streaming from the objects we see. The function of the eye is simply that of adjusting and correlating the conditions necessary for the production of an impression. This impression is carried in due course to a special part of the brain, where it becomes transformed into a special sensation—that of sight. We thus truly see not with the eye, but with the brain, or rather with that portion of the brain which lies in direct relation with the nerves of sight. The eye represents the lenses of the photographer's camera; but the brain corresponds to the sensitive plate which receives the image of the sitter, and on which all subsequent alterations of the image are effected. Of the other senses, the same prominent feature may also be expressed—namely, that in the brain and not in the mere organ of sense must be allocated the true seat of knowledge. The ear modifies waves of sound; but it is the brain which distinguishes, appreciates, and acts upon the information conveyed by the organ of hearing. The finger touches an object, but the seat of knowledge does not exist at the extremity of the hand. The impression of touch is duly conveyed to the brain as before, there to be analyzed, commented upon, and, if necessary, acted upon as well.

On the appreciation of the simple fact that the brain is the true seat of the senses, rests the whole explanation of the ghosts and apparitions which occasionally attend the footsteps and meet the eyes of humanity. When we are conscious of looking at a real object, a sensation of sight is formed in the brain, as we have seen. Such a sensation we call an "objective" one, because it is derived from a veritable object. So, also, when we hear a tune played by a person whom we see, or of whose

existence, even when unseen, we entertain no doubt, the sensation of sound is then called "objective."

But, as I have remarked above, the brain, it is evident, has the ordinary power of forming images which may be projected outwards in the form of the fancies of every-day life. These projected fancies may grow into plain and apparent sensations or images under the requisite conditions. When we hear a "ringing in the ears," we know perfectly well that no objective sound exists, and scientifically we say that the sensation of hearing in such a case is an internal or *subjective* one. When we see flashes of light which have no existence in the outside world on which we happen to be gazing, we explain their occurrence in the same way. Now, on such a basis, the ghosts of science are both raised and laid. The ghosts and phantoms of sane and insane persons alike resemble the sparks or flashes of light, in that they are *subjective sensations*. They arise, in other words, from some irritation of that part of the brain which would have received the impression of sight had the objects in question had an actual existence. But the subject also involves a reference to bodily condition and to memory itself. Primarily, it will be found that illusive visions appear only when the health of the subject of these visitations is in a weakly state. The derangement of the health is the primary cause of these curious states.

As an illustration of ghost-seeing by an individual who was not only sane in every respect, but of high mental culture, we may select the case of Nicolai. He was a well-known citizen and bookseller of Berlin, who read an account of his case before the Berlin Academy of Sciences. I give the account of his case in his own words. "During the few latter months of the year 1790," says Nicolai, "I had experienced several melancholy incidents, which deeply affected me, particularly in September, from which time I suffered an almost uninterrupted series of misfortunes, that affected me with the most poignant grief. I was accustomed to be bled twice a year, and this had been done once on the 9th of July, but was omitted to be repeated at the end of the year 1790. . . . I had, in January and February of the year 1791, the additional misfortune to experience several extremely unpleasant circumstances, which were followed on the 24th of February by a most violent altercation. My wife and another person came into my apartment in the morning in order to console me; but I was too much agitated by a series of incidents which had most powerfully affected my moral feeling to be capable of attending to them. On a sudden I perceived, at about the distance of ten steps, a form like that of a deceased person. I pointed at it, asking my wife if she did not see it. It was but natural that she should not see anything; my question, therefore, alarmed her very much, and she sent immediately for a physician. The phantasm continued for some minutes. I grew at length more calm, and, being extremely exhausted, fell into a restless sleep, which lasted about half an hour. The physician ascribed the vision to violent mental emotion, and hoped there would be no return; but the violent agitation of my mind had in some way disordered my nerves and produced further consequences, which deserve a more minute description.

"At four in the afternoon, the form which I had seen in the morning reappeared. I was by myself when this happened, and being rather uneasy at the incident, went to my wife's apartment; but there likewise I was persecuted by the form, which, however, at intervals disappeared, and always presented itself in a standing posture. About six o'clock there appeared also several walking figures, which had no connection with the first. After the first day the form of the deceased person no more appeared; but its place was supplied with many other phantasms, sometimes representing acquaintances, but mostly strangers: those whom I knew were composed of living and deceased persons, but the number of the latter was comparatively small. . . . When I shut my eyes these forms would sometimes vanish entirely, though there were instances when I beheld them with my eyes closed; yet when they disappeared on such occasions, they generally returned when I opened my eyes. . . . They all appeared to me in their natural size, and as distinct as if alive, exhibiting different shades of carnation in the uncovered parts, as well as different colours and fashions in their dresses, though the colours seemed somewhat paler than in real nature; none of the figures appeared particularly terrible, comical, or disgusting, most of them being of an indifferent shape, and some presenting a pleasing aspect. The longer these persons continued to visit me, the more frequently did they return, while at the same time they increased in number about four weeks after they had first appeared. I also began to hear them talk; sometimes among themselves, but more frequently they addressed their discourse to me; their speeches being uncommonly short and never of an unpleasant turn. At different times there appeared to me both dear and sensible friends of both sexes, whose addresses tended to appease my grief, which had not yet wholly subsided; their consolatory speeches were in general addressed to me when I was alone. Sometimes, however, I was accosted by these consoling friends while I was engaged in company, and not infrequently while real persons were speaking to me. The consolatory addresses consisted sometimes of abrupt phrases, and at other times they were regularly executed."

Such was Nicolai's account of the phantom-visitors who addressed and consoled him in his domestic affliction. It is interesting to pursue still further his account of their disappearance. We must bear in mind that Nicolai had neglected to repeat at the end of 1790 the blood-letting in which it was customary in the days we speak of for our forefathers to indulge. It was at last decided that leeches should be used, and on April 20, 1791, at eleven o'clock in the morning, Nicolai informs us the operation was performed. "No person," he continues, "was with me besides the surgeon; but during the operation my chamber was crowded with human visions of all descriptions. This continued uninterruptedly till about half an hour after four o'clock, just when my digestion commenced. I then perceived that they began to move more slowly. Soon after, their colour began to fade, and at seven o'clock they were entirely white. But they moved very little, though the forms were as distinct as before; growing however, by degrees more obscure, yet not fewer in number, as had generally been the case. . . . They now seemed to dissolve in the air, while fragments of some of them continued visible for a considerable time. About eight o'clock, the room was entirely cleared of my fantastic visitors. Since that time," adds Nicolai, "I have felt twice or three times a sensation as if they were going to reappear, without, however, actually seeing anything. The same sensation surprised me just before I drew up this account, while I was examining some papers relative to these phenomena, which I had drawn up in the year 1791."

The explanation of Nicolai's case, then, is clear enough, on the simple basis of *subjective* sensation, already defined and explained. Images, impressions, or sensations

of things seen and heard were reproduced from within the brain and projected forwards, so to speak, on the organs of sense in such a fashion as to give rise to the belief of their external reality. This belief, corrected by Nicolai's education and knowledge, was modified, and the true nature of his "ghosts" was duly apprehended by him. Hence we say Nicolai suffered from mere "illusions." Had he believed these subjective sensations to arise from objects external to himself, and had he believed in their reality—as a person of weak mind would have believed in them—the term "hallucination" would have been correctly applied to his case.

It remains for us in another article to note certain interesting points in connection with these subjective sensations recently raised by Dr. D. Hack Tuke.

(To be continued.)

THE LAW OF HEALTH AS IT AFFECTS OUR HOMES.

By J. Ridley Shield.

FOURTH PAPER.

An attempt has been made of recent years to control not only the structural portions of our homes, but the way in which the sanitary arrangements are carried out; and certainly if it is necessary for human beings to see that the food with which they nourish their bodies is sound and pure, it is of equal importance, at any rate, that the houses in which they spend either their working or sleeping hours, and in many instances both, should be so adapted as to maintain health in its highest form.

Now there are several ways in which houses may be unfit for healthy human habitation, and we say healthy habitation because there are thousands of people who will live in houses which are nothing more or less than pestilential dens, unless they are removed by persons having them under their control. We will consider, then, houses which are overcrowded, houses which are unsanitary, and houses which are not safe structurally.

The evils of overcrowding are twofold. In the first place, there are the physical evils arising from the want of sufficient cubic space; and in the second there is a certainty of indecency, tending in too many instances to immorality. Much has been written as to this evil, and it is heartrending to read of the terrible state in which thousands of our hard working population live.

In all our great cities there are hundreds of thousands who, after a long day of severe toil, return at night to their homes (if the loathesome dens in which they live can be so called), where there can be no privacy, no peace, and consequently little rest. It must not, however, be thought that our cities and large towns alone promote this scandal. It is surprising of what frequent occurrence it is in the country. There are numberless cottages situated on breezy commons and apparently, to the outward eye, everything that is clean, homelike, and healthy, which are nothing more than human rabbit-warrens. These places are chiefly the property of small men, who, with no lofty idea of what is wholesome themselves, scarcely see the necessity for health's sake, or the desirability in the interests of morality, for ampler accommodation, or a smaller number of tenants.

It is only right to mention that, speaking accurately, the question of overcrowding is one of nuisance; but we think it better to deal with the matter here at length—so important is it—rather than make a bare reference to it when we treat of nuisance later on.

Under the Public Health Act, 38 & 39 Vic. c. 55, any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family, shall be considered a nuisance.

When a local authority shall be satisfied of the existence of such overcrowding as is mentioned above, such authority shall serve a notice on the person by whose act, default, or sufferance such overcrowding continues; or, if such person cannot be found, on the owner or occupier of the premises on which the overcrowding arises, requiring him to abate the same within a time to be specified in the notice, and to execute such works and do such things as may be necessary for the purpose; and, under circumstances which are set out, the local authority may themselves do away with the overcrowding.

If such notice is not complied with, the local authority may obtain a summons against the offender to appear before a Court of Summary Jurisdiction. The Court, on proof of the overcrowding, shall make an order on the offender, requiring him to comply with all or any of the requisitions of the notice, and the Court may impose a penalty of £5, or may prohibit the using of the house so overcrowded. Any person not obeying any such order of the Court is liable to a penalty of 10s. per day, and any person wilfully acting contrary to an order of prohibition shall be liable to a penalty not exceeding 20s. per day.

When there have been two convictions for overcrowding a house within three months a Court of Summary Jurisdiction may, on the application of the local authority within which the house is situate, direct the closing thereof for such period as the Court deems necessary.

Under the Factory and Workshop Act provision is made to guard against overcrowding whilst work is going on, and also for the due ventilation of all factories and workshops.

Even by the cursory glance we have taken at the enactment dealing with overcrowding, there is sufficient to show any one who cares to enquire into the matter that there is a remedy for this evil of overcrowding if persons will only take the trouble to exercise it. Houses which are unsanitary can be dealt with only to a limited extent. Any man may with impunity allow his house to get into the most disgusting state, through want of due attention to sanitary matters, so long as he does not affect the health of his neighbours. He may injure himself—that is his own look out—but he cannot do anything to imperil the lives of his neighbours without being liable to account.

The law, however, does exercise its authority over certain matters so far as the healthy condition of our houses is concerned, and this not so much with a view to protect the person controlled as to guard the community at large from the indiscretion or inattention of a particular individual.

For instance, under the Public Health Act, 1875, 38 & 39 Vic., c. 55, sec. 23, where any house within the district of a local authority is without sufficient effectual drainage, the local authority shall require the owner or occupier to make within a reasonable time a proper drain emptying into the sewer or a cesspool, as the circumstances of the case demand. If such notice be not complied with, the local authority may, after the expiration of the time specified in the notice, do the work required, and may recover in a summary manner the expenses incurred by them in so doing from the owner.

By sec. 25. In an urban district no new house can

be erected, nor can a house be rebuilt or pulled down to or below the ground floor, unless and until a proper covered drain or drains be constructed in accordance with the report of the surveyor to such urban authority.

Any person contravening this section is liable to a penalty of £50.

Under sec. 41. A local authority, on the written application of any person complaining that any drain belonging to premises within the district are injurious to health, may empower their surveyor or inspector of nuisances after notice, or in cases of emergency without notice, to enter the premises where the drain, &c., is complained of, and cause the ground to be opened and examine such drain, &c. If the surveyor's report is unfavourable, the local authority may give notice in writing to the owner or occupier requiring him either forthwith or within a reasonable time to do all necessary work. If such notice is not complied with, the person to whom it is given shall be liable to a penalty of 10s. per day whilst his default lasts, and the local authority may execute the work and recover the expense thereof in a summary manner from the owner.

A local authority has also power to close polluted wells, cisterns, &c., on the representation of any person within their district that the water therein is unfit for drinking or domestic purposes, or for manufacturing drinks for the use of man; but this power can only be exercised on an order obtained by the local authority before a Court of Summary Jurisdiction.

No house can now be erected within the Metropolis limits unless properly provided with water-closet, privy, or earth closet; and if, after due notice, an owner fails to provide proper accommodation of this nature, the Vestry or District Board, as the case may be, may do what is necessary, and charge him with the cost.

Under the Public Health Act there are very ample provisions dealing with the same subject within the district of any local authority, and any person erecting or rebuilding houses without sufficient accommodation of this character is liable to a penalty not exceeding £20, and the local authority has power to enforce what is necessary and proper in this way.

The law as to dangerous buildings or structural defects is scarcely well placed when we are considering the health-view of the matter, but it may be opportune to consider how the public are protected in the event of buildings being either ruinous or dangerous. It goes without saying that in a large town there is much more risk to the community from dangerous or ruinous buildings than there could be in the country, and consequently the Legislature dealt with the matter in the main from a Metropolitan point of view. The chief Act on the subject is the Towns Improvement Clauses Act, 1847, 10 & 11 Vic., c. 34; but its essential provisions are incorporated in the Public Health Act; so that wherever there is a ruinous or dangerous building, be it town or country, the public can be protected.

Under this Act if any building or wall, or anything fixed thereon, is deemed to be in a ruinous state, and dangerous to passengers or the occupiers of neighbouring buildings, the duly authorized surveyor shall cause a hoard or fence to be put up for the protection of passengers, and shall cause notice to be sent to the owner of such building or wall, and shall also cause such notice to be put on the door, or other conspicuous part of the premises, or given to the occupier, requiring the owner or occupier forthwith to take down, secure, or repair such building, wall, or other thing, as the case requires.

If such notice is not attended to within three days, two justices may, on complaint, order the owner or occupier to comply with such notice, to the satisfaction of the surveyor, within a time to be fixed by the justices; and if such order is not obeyed, the Commissioners in London and the proper authority in the county may do what is necessary themselves, and all expenses are to be paid by the owner. There are certain provisions for levying the expenses incurred by distress, and also for the Commissioners taking the house or ground, making compensation for the same.

Of necessity there are many points which cannot be detailed within the limits of an article having so wide a range, and it will be well for our readers to refer to the Acts which have been quoted for any particular point.

Slaughter-houses again are the subject of considerable legislation, and when the nature of the work carried on in them is taken into account, and the serious effect which want of attention to their sanitary condition might have upon the people's health, it is not to be wondered at that they have received great attention.

Piché or Pichi.—Under the name of Piché, the *Fabiana imbricata* is known in Chili, Peru, and the Argentine Republic for its prompt and decisive action in diseases of the liver and in the urinary passages. This shrub, which might from its appearance be taken for a Conifer, belongs to the *Solanaceæ*, and grows on dry elevated slopes. It is remarkable for its light bluish-green branches, which contrast very much with the surrounding vegetation. The branches are subdivided into smaller ones, which are rounded, thin, covered with imbricated scales, which are really only thickened leaves, oval and acute in shape, of a length of about $\frac{1}{10}$ inch, and overlapping one another. Its flowers, which appear only in the second year, are placed at the extremity of the smaller branches, and are solitary; the calyx, which closely surrounds the ovary, is green, then yellowish, thick, with five long and obtuse lobes; the corolla is gamopetalous, with a tube dilated at its superior end, its throat is slightly compressed, lobes short, semi-circular and small; stamens five, inserted in the tube of the corolla; anthers short, bilocular, opening longitudinally. The fruit is oblong, ovoid, crustaceous, light brown, about two inches in length; the seeds are ovoid, nearly angular, with a crustaceous envelope. In commerce Piché consists of the stem, branches, and leafy branches; the large branches are from $\frac{3}{4}$ to $1\frac{1}{2}$ inches in diameter, covered with a thin, smooth bark, slightly wrinkled longitudinally, ash-grey in colour, and having tuberculous protuberances. The smaller branches are from $\frac{1}{10}$ to $\frac{1}{4}$ inch in diameter, of a darker colour than the preceding, and present at regular intervals distinct evidence of the place where the small leaves are inserted. The wood is of a yellowish-white colour. All these parts of the plant are covered with a greenish or greenish-grey resin, which would appear to protect the surfaces of the plant, and so prevent the too rapid evaporation of its moisture during the very long dry seasons to which it is subject. It is now being cultivated in Europe. Piché is especially indicated in catarrhal inflammation, renal colic, prostatitis, cystitis, musky residual urine, renal calculi, inflammation of the ureters, &c.

CHEMICAL ANALYSIS.—Dr. Drinkwater, Lecturer on Chemistry in the Edinburgh Medical School, undertakes the Analysis of Water, Foods, Wall-Papers, and of all other products and articles connected with Household Health and Commercial Interests. Terms on application to Dr. Drinkwater, Chemical Laboratory, 41, Chambers-street, Edinburgh.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

DIARRHŒAL DISEASES.

With the approach of warm weather there is a great increase in the number of diarrhœal diseases. Causes which at another time would have no effect whatever are operative during the heated term. The food is more likely to disagree, and intestinal catarrh is common. Gastric and liver troubles are rife, and a common sense view of what should be done under given circumstances must prove of interest.

In very many forms of diarrhœa there is sometimes one point of irritation at which there is some foreign body lodged. This body excites an irritating discharge, which affects the whole canal. In children it is often cheese curds from the milk which produce the trouble; in adults a piece of meat, fruit, &c. It must be clear to all that in diarrhœa due to irritation, the best and first thing to do is to administer a laxative—in other words, to remove the source. For this purpose nothing can surpass rhubarb for adults, while for infants castor oil is both safe and effective. Rhubarb possesses the advantage over many laxatives that it tends to act as an astringent as well as purgative. The Rhubarb Tabloids contain three grains each, and the dose is from four to six. Rhubarb and soda is an old combination which does not gripe; and rhubarb and magnesia is also most agreeable in its action. When there is pain, two five-grain Dover Powder Tabloids will be sufficient.

In diarrhœa, when the foregoing are indicated, the food allowed should be matter for consideration. If milk is given, it should not be given without a little lime water, a tablespoonful to the pint. Better still, the milk should be peptonized with a Fairchild's Peptonizing Powder, especially in the case of infants. Potatoes, bread, and starchy foods should be taken sparingly by all, as stout, solid, and indigestible preparations. Very much depends in the treatment of diarrhœa on the food allowed, which should always be bland and soothing. It is well in the case of babies to suspend the milk for twenty-four hours, and administer, meanwhile, egg albumen, dissolved in water and sweetened. If the eggs cannot be obtained fresh, gum arabic, dissolved in water, with cream and sugar, will nourish for a time. Barley water is not very lasting. Bread jelly is not always bad, if made by soaking well, so as to wash out the lactic acid present. The bread should be stale.

There is a form of diarrhœa which is not profuse, occurring after meals, and alternating with a more or less constipated state of the bowels. It is usually accompanied by some flatulence, and is an indication more of indigestion than anything else. Charcoal is about the best thing there is for it, and four or five tabloids should be taken after each meal.

One of the most troublesome of diseases to treat is dysentery, in which there is an agent found in India to be of great value. That agent is ipecac, which is given in very large doses. Under these enormous doses the watery stools soon become semi-solid, and more natural. Six five-grain Ipecac Tabloids might be taken crushed in milk, five drops of laudanum having been taken thirty minutes before. If there be considerable vomiting, it will subside shortly, for the system soon acquires tolerance of the drug.

Occasionally one sees in Great Britain forms of chronic dysentery that defy all treatment but one, and that one is peptonized foods conjoined with recumbence in bed. Say what we will in the treatment of abdominal affections, rest is of the greatest importance and service. We have seen the Fairchild peptonizing process prove the salvation of two men who had suffered with chronic dysentery for many years. This process enables one to prepare predigested foods of all kinds and without any special extra trouble.

ABOUT THE BATH.

II.

Professor Braun says:—"The more vigorous are a man's physical movements the less need has he for ablutions for the maintenance of his health, partly because the continued friction of most parts of the skin and the perspiration produced by work are sufficient in themselves to perform the mechanical task of cleansing. Thus experience teaches that to the labourer baths and ablutions are less necessary than to a man of a sedentary mode of life, and to the adult than to the infant, whose lungs discharge their office feebly."

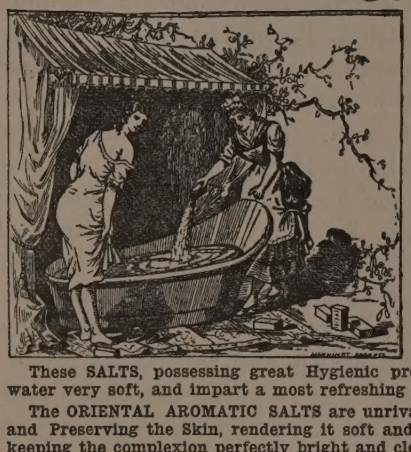
Nevertheless, the usefulness of water externally is not disputed. It is a splendid tonic as well as detergent for those in somewhat feeble health, and the kind of water employed is of some moment. The purest water met with under ordinary circumstances is rain water, which is certainly a great luxury to those in towns, for washing. If it were fully appreciated how valuable rain water really is, the people of our large towns would see that it was not always lost. It is free from the hardness which characterizes spring water, feels soft to the hands, forms a beautiful lather, and agrees well with the skin. It is the water to use in shaving.

As nearly everybody knows, waters are of two kinds, hard and soft so called; the former containing carbonates, sulphates, and chlorides of soda, lime, and magnesia, the two latter particularly in excess; the soft waters are those from which the lime and magnesia are nearly absent. The water from the Metropolitan Water Company contains, it is said, about twenty grains per gallon of salts of lime and magnesia, and is therefore a hard water. Lake Katrine, in Scotland, and Bala Lake, North Wales, contain very little lime and magnesia, far less than a grain per gallon, and are what are known as soft waters. In the London waters the carbonic acid holds the lime in solution, but if the water be boiled the acid is driven off and the lime forms a sediment at the bottom of the kettle. It is a custom with some housewives to add a little lime to the water; this combines with the free carbonic acid to form carbonate of lime, which also falls to the bottom of the vessel. Another custom among housewives is to add a little soda to the water. Where the hardness is due to sulphates of lime and magnesia, soda is the thing required. After rain water, for personal washing, comes river water, and, last of all, that from natural springs.

The purest and best water that can possibly be obtained is that which has been distilled, but distillation is not a process which can always be carried out. The value of certain salts in the water as in sea-bathing seems beyond dispute, and medicated waters have been used with advantage in the form of the wet pack in Germany to relieve old inflammatory deposits.

The differences we thus detect in water will account to the reader for the difference which he observes in the

DELIGHTFULLY PERFUMED BATHS.
USE
ORIENTAL AROMATIC SALTS.



FOR BATH AND ALL TOILET PURPOSES.

These SALTS, possessing great Hygienic properties, render the water very soft, and impart a most refreshing perfume.

The ORIENTAL AROMATIC SALTS are unrivalled for Beautifying and Preserving the Skin, rendering it soft and velvet-like, and for keeping the complexion perfectly bright and clear.

In all cases of Skin Diseases these Salts will be found invaluable.

To be had of all Chemists, Perfumers, and Stores.

SOLE PATENTEES:
S. TRAVADO & CO., 27, Jewry-st., London, E.C.
To be had also of Messrs. BREIDENBACH & CO., Perfumers to the Queen, 157b, NEW BOND-STREET, W.

TEETH.
A COMPLETE SET, ONE GUINEA.
Single Tooth, 2s. 6d.
FIVE YEARS' WARRANTY.

Dr. ANDREW WILSON, late R.N., says:—"I can recommend Mr. Goodman as a very skilful and humane dentist. His reasonable charges should attract to him all classes."

MR. GOODMAN, *Surgeon Dentist,*
(Late Manager for Messrs. Eskell,)
41, LUDGATE HILL (Opposite Old Bailey).
Hours 10 to 8.

Also at 68a, Market-street, Manchester; 30a, Bold-street, Liverpool; 57a, Boar-lane, Leeds; 2, Piccadilly, Bradford; 2, Bank-street, Sheffield; 36, Gallowtree-gate, Leicester; 8, Pavilion Buildings, Brighton; 251, Sauchiehall-street, Glasgow; 29, Hanover-street, Edinburgh; 156, Union-street, Aberdeen, &c., &c.

NEW BOOK by DR. ANDREW WILSON.

Just Published. Crown 8vo, price 6s.
STUDIES IN LIFE AND SENSE.
BY
DR. ANDREW WILSON.
With numerous Illustrations.

LONDON: CHATTO & WINDUS, 214, PICCADILLY, W.

THE ENCORE WHISKY.
Lancet.—"Wholesome and pleasant."

THE ENCORE WHISKY.
British Medical Journal.—"A safe stimulant."

THE ENCORE WHISKY.
Medical Times.—"Very wholesome. May be safely used."

THE ENCORE WHISKY.
Medical Press.—"Invaluable as an alcoholic stimulant."

THE ENCORE WHISKY.
Medical Record.—"The purest of alcoholic stimulants."

THE ENCORE WHISKY.
Sanitary Record.—"An excellent 'dietetic' stimulant."

THE ENCORE WHISKY.
Practitioner.—"A safe stimulant."

THE ENCORE WHISKY.
Food Reformer.—"All who value health should use it."

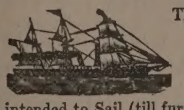
THE ENCORE WHISKY.
Dr. Bartlett.—"Purest whisky I ever examined."

THE ENCORE WHISKY.
Dr. Paul.—"Free from all injurious substance."

THE ENCORE WHISKY.
Dr. Tichborne.—"Wholly free from all impurities."

THE ENCORE WHISKY.
Dr. Macadam.—"Very wholesome and fine quality."
Sold Everywhere.
BERNARD & CO., LEITH DISTILLERY, SCOTLAND.
Wholesale Depôt—THREE CROWN-SQUARE, BOROUGH, S.E.

LEITH and LONDON.



The LONDON and EDINBURGH SHIPPING COMPANY'S First-class Steamships, METEOR, IONA, MALVINA, MARMION, MORNA ("Meteor," "Iona," "Malvina," and "Marmion" lighted by Electricity), or other of the Company's Vessels, are intended to Sail (till further notice) from VICTORIA DOCK, LEITH, every WEDNESDAY, FRIDAY, and SATURDAY, and from HERMITAGE STEAM WHARF, WAPPING, E., every TUESDAY, WEDNESDAY, and SATURDAY.

FARES—First Cabin, including Steward's Fee, 22s.; Second Cabin, 16s. Deck (Soldiers and Sailors only), 10s.

RETURN TICKETS, available for Twelve Months (including Steward's Fee both ways)—First Cabin, 34s.; Second Cabin, 24s. 6d.

☞ *Provisions, &c., may be had from the Steward on Moderate Terms.*

Not responsible for Passengers' Luggage, unless booked and paid for.

Cheap Circular Tours round the Land's End, in connection with Clyde Shipping Co.'s Steamers.—Fare, 1st Cabin, 47s. 6d.; and by Bristol Channel, in connection with Messrs. Sloan & Co.'s Steamers.—Fare, 1st Cabin, 35s.—(Railway Fares extra).

Apply in LONDON, to London and Edinburgh Shipping Company, Hermitage Steam Wharf, Wapping; Aberdeen Steam Navigation Co., 102, Queen Victoria-street, E.C.; G. W. Wheatley & Co., 23, Regent-street; Lavington Brothers, 69, Old Bailey; EDINBURGH—Cowan & Co., 4, Princes-street; GLASGOW—Cowan & Co., 23, St. Vincent-place; GREENOCK—D. Macdougall, 1, Cross Shore-street; or to THOMAS AITKEN, 8 & 9, Commercial-street, Leith.

Telegraphic Addresses: Leith, "Aitken;" London, "Edina."

MEMORY. LOISETTE'S System of Memory Training.

"Physiological and scientific in the highest degree."—Dr. ANDREW WILSON (27th April, 1883).

"We again recommend those suffering from defective memory to give this system a fair and conscientious trial."—Dr. ANDREW WILSON (18th Jan., 1889).

"The value of the fee returned to me twenty-fold."—Dr. ALBERT CARTER (11th November, 1888).

Of great advantage to a strong memory; incalculable aid to a weak one."—Dr. J. M. BUCKLEY.

"Able to give the gist of any book after reading it once."—Rev. J. M. MACDONALD, M.A.

"Easily acquired and very interesting."—Rev. S. BELL, M.A.

"Cure of mind wandering and increase of vocabulary."—J. MACGREGOR, M.A.

"Top in examination."—T. TAIT, M.A.

LESSONS BY POST OR VOICE.
Opinions of Mr. Proctor and of many members of the Medical, &c., Professions, Free.
A. LOISETTE, 57, New Oxford-street, London.

A WOMAN FROM AUSTRIA.

NEAR the village of Zillingdorf, in Lower Austria, lives Maria Haas, an intelligent and industrious woman, whose story of physical suffering and final relief, as related by herself, is of interest to Englishwomen.

"I was employed," she says, "in the work of a large farmhouse. Over-work brought on sick headache, followed by a deathly fainting and sickness of the stomach, until I was unable to retain either food or drink. I was compelled to take to my bed for several weeks. Getting a little better from rest and quiet, I sought to do some work, but was soon taken with a pain in my side, which in a little while seemed to spread over my whole body, and throbbed in my every limb. This was followed by a cough and shortness of breath, until I finally could not sew, and I took to my bed for the second and, as I thought, for the last time. My friends told me that my time had nearly come, and that I could not live longer than when the trees put on their green once more. Then I happened to get one of the Seigel pamphlets. I read it; and my dear mother bought me a bottle of Seigel's Syrup, which I took exactly according to directions; and I had not taken the whole of it before I felt a change for the better. My last illness began June 3rd, 1882, and continued to August 9th, when I began to take the Syrup. Very soon I could do a little light work. The cough left me, and I was no more troubled in breathing. Now I am perfectly cured. And oh! how happy I am! I cannot express enough gratitude for Seigel's Syrup. Now, I must tell you that the doctors in our district distributed hand-bills cautioning people against the medicine, telling them that it would do them no good, and many were thereby influenced to destroy the Seigel pamphlets; but now whenever one is to be found, it is kept like a relic. The few preserved are borrowed to read, and I have lent mine for six miles around our district. People have come eighteen miles to get me to buy the medicine for them, knowing that it cured me, and to be sure to get the right kind. I know a woman who was looking like death, and who told me there was no help for her; that she had consulted several doctors, but none could help her. I told her of Seigel's Syrup, and wrote the name down for her, that she might make no mistake. She took my advice and the Syrup, and now she is in perfect health, and the people around us are amazed. The medicine has made such progress in our neighbourhood that people say they don't want the doctor any more, but they take the Syrup. Sufferers from gout who were confined to their bed, and could hardly move a finger, have been cured by it. There is a girl in our district who caught a cold by going through some water, and was in bed five years with costiveness and rheumatic pains, and had to have an attendant to watch by her. There was not a doctor in the surrounding district to whom her mother had not applied to relieve her child, but every one crossed themselves and said they could not help her. Whenever the little bell rang, which is rung in our place when anybody is dead, we thought surely it was for her; but Seigel's Syrup and Pills saved her life, and now she is as healthy as anybody, goes to church, and can work even in the fields. Everybody was astonished when they saw her out, knowing how many years she had been in bed. To-day she adds her gratitude to mine for God's mercies and Seigel's Syrup. "MARIA HAAS."

Mother Seigel's Curative Syrup is for sale by all Chemists and Medicine Vendors, and by the proprietors, A. J. White, Limited, 35, Farringdon-road, London, E.C. Price 2s. 6d. per Bottle.

way soap acts under different circumstances. Soap, as is well known, is made by the action of soda or potash, or both, upon fat. In all the ordinary soaps there is some excess of an alkali, and here occasion may be taken to refer to the *rationale* of the cleansing action of soap. It is given by Malcolm Morris as follows:—The dirt adhering to the body is mostly composed of dust and other extraneous matter combined with the perspiration and the greasy excretion from the skin. When ordinary hard soap is brought into contact with water it is decomposed, and gives up part of its soda which unites with, and removes from, the skin the unctuous dirt, thus rendered mixable in the water for washing. As the more the liberated soda is diluted the less will be its caustic effect on the skin, it is clear that a liberal supply of water should accompany the use of soap in personal ablution."

A word may be added to the above. A goodly amount of water will by no means annul the undesirable action of a free alkali. The action of an alkali is corrosive, and it dissolves the cuticle when applied to it. In skin affections this action becomes most harmful and unfortunate, as it proves a powerful irritant which impedes the patient's recovery. By the employment of extra fat, a new scientific soap has been manufactured by a special process, that contains instead of free alkali some free saponifiable fat, that is, a slight excess of fat in the soap which renders it devoid of the harmful properties of ordinary soaps, and makes it specially suitable for all toilet as well as medicinal purposes. We refer to "Vinolia" Superfatted Soap, that most delightful and safest of soaps.

Men in Stays.—Dr. Vacher, in a recent article, remarks: I should not have thought it necessary to warn men against using stays, but for the information conveyed in a price list which recently came into my hands. The list is issued by a well-known London firm, styling themselves *artistes en corsets*, and in it I find that, in consequence of the increased demand for corsets by gentlemen, "we have been induced to give this department our special attention, and we feel sure that we shall be able to meet thoroughly and efficiently a want that, up to the present time, has been neglected"; and then follow instructions for self-measurement, the whole being embellished with a picture of a handsome man, with a moustache, wearing stays. Of course, stays are every bit as objectionable for men as for women. Indeed, everything that constricts the abdomen or thorax, it matters little under what name, is injurious. The broad belts, fastening with straps and buckles, commonly worn by artisans, runners, and hunting men, are almost as bad as stays, weakening the abdominal muscles, and assisting in the production of rupture.

Fifth Edition.—Now Ready.—Greatly Enlarged, and completely Revised.

"*A Book every Young Man should read.*"

"A Lecture to Young Men on Purity of Life and the Preservation of Health." By A Graduate. Price One Shilling, or post-free, 1s. 1d., from Henry Renshaw, Medical Publisher, 356, Strand, London, W.C.

This pamphlet, now being issued in its Fifth Edition, forms a complete refutation of quackery of all kinds, and is a safe and reliable guide, from the medical standpoint, to all young men. Every Youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense. Full directions for the treatment of "Nervous Debility" so-called, and allied ailments, are also given. Thousands of sufferers have welcomed this pamphlet as a veritable beacon-light to health and purity of life.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

WOMAN'S PLACE IN NATURE.

Let us consider briefly how matters stand in the animal world, confining ourselves, for shortness, to the Vertebrate series. In fishes, and to a great extent in reptiles, the calls upon the two sexes for reproductive purposes are about equal. The male herring and the female herring expend about the same amount of material, time, and trouble on milt and roe; the young shift for themselves without burdening either. In birds, the strain on the female is distinctly greater than on the male; the eggs are larger, the duties of maternity heavier, and the task of incubation falls for the most part as a burden on the mother. Here, then, the female begins to be told off more distinctly for reproduction, and the male often helps to feed her and the young during the breeding season.

In mammals the same principle is carried still further; the habit of gestation and the suckling of the young make the burden of sex much heavier on the female. In man this tendency reaches its highest development; the long period of gestation and suckling, the helpless infancy, and the slow childhood compel the mothers to be almost wholly devoted to reproductive and nursing functions, while the fathers look rather after the food, shelter, and clothing of the family. Hence, for the most part the males have built up human civilization and have made the great functionally-acquired gains in human faculty, while the females have acted as mere passive transmitters of these male acquisitions. They have themselves, no doubt, largely inherited and profited by them, but merely for the most part through direct male transmission. They have had as little themselves to do with most of the acquisitions as the negresses or mulattresses in the case given above have had to do with the final production of European hair, European features, and European complexion in their remote offspring. Able women there are, no doubt; but the things that produce and beget ability—commerce, manufacture, art, invention—are and have always been almost entirely in male hands.

In man, therefore, I would confidently assert, as biological fact, the males are the race; the females are merely the sex told off to recruit and reproduce it. All that is distinctively human is man—the field, the ship, the mine, the workshop; all that is truly woman is merely reproductive—the home, the nursery, the schoolroom. There are women, to be sure, who inherit much of the male faculty, and some of these prefer to follow male avocations; but in so doing they for the most part unsex themselves; they fail to perform satisfactorily their maternal functions. Even if in any community a large proportion of the women succeed in making themselves practically into neuters, there must still always remain a sufficiency of wives (or their equivalents) to carry on reproductive functions, else must that community cease to exist. And this very necessity for telling off at least a certain considerable number of the women for the arduous duties of human maternity prevents the possibility of women as such ever being really in any deep sense the race. It is human to till, to build, to navigate, to manufacture; and these are the functions that fall upon man. The functions that

specially fall upon woman are those which woman, as female, shares equally with all other females of the mammalian type. Any other belief seems to me pre-Darwinian and anti-biological.—*Grant Allen, in the "Forum."*

BRAINS AND STOMACHS.

Why are active brain-workers so frequently, we almost said so universally, dyspeptic? Evidently because they use their brains better than their stomachs. Charles Dickens was an enormous eater; Bayard Taylor was a gourmand and a beer-guzzler, and when he died was bloated to such an extent that his coffin could not be carried through an ordinary door, but had to be passed through a bay-window.

The dyspepsia of brain-workers is generally charged to excessive mental work. From observation we are satisfied that this is a mistake. It is not too much brain-work, but too little muscle work, and neglect of the commonest principles of hygiene in its relations to digestion, that makes such pessimistic authors as Carlyle, such acute theologians as Calvin, such savage sceptics as Voltaire. The latter once wrote to Lord Chesterfield: "My Lord Huntingdon tells me that you have a good stomach, which is worth more than a good pair of ears."

Sydney Smith declared that he could feed or starve men into virtues or vices, and that the character, talents, virtues, and qualities are powerfully affected by beef, mutton, pie-crust, and rich soups.

Good humour helps to keep a man in good digestion, but is not a substitute for dietetic rectitude or ample muscular exercise. For example, Smiles tells us of a broken-down dyspeptic that one day consulted Dr. Abernethy. The doctor looked him over, then said:

"Well, I don't think there is much the matter with you You want stirring up; you want cheerfulness. Go and see that clever fellow, Grimaldi; you will get a hearty laugh; and that will do you more good than physics."

"Alas," said the patient, "I am Grimaldi!"

Buckthorn in Toothache.—Dr. Gretchinsky has called attention to a practice which obtains among the peasantry in some parts of Southern Russia of treating toothache with a gargle of decoction of buckthorn—*Rhamnus catharticus.* He states that, in order to test the ground of this practice, he made a series of control experiments upon a number of inmates of the local prison who were suffering from toothache. The patients were ordered to gargle their mouths with the cooled decoction every three or five minutes until the pain disappeared, and in every case the suffering ceased in about half an hour, though there still remained a vague aching or kind of itching about the teeth. A prolonged anodyne effect was produced by inserting a cotton wool plug steeped in the decoction in the cavity of a hollow tooth. Dr. Gretchinsky considers that his experiments proved decoction of buckthorn to be a reliable means for mitigating such dental pain as depends upon inflammation of the pulp. He recommends the decoction to be made by boiling 100 parts of the bark in water sufficient to yield 200 parts of the strained liquid and adding 10 parts of brandy. Another writer attributes the anodyne action to the powerfully astringent properties of the decoction.

Special Notice.—The best stimulant for dietetic and other purposes is the "Skerryvore" (Registered) Blend of Fine Matured Scotch Whiskies, certified of the utmost purity by Mr. E. G. Clayton, F.C.S., Member of the Society of Public Analysts. Sold only by John Twatt, 36, Argyle-place, Edinburgh. Price 20s. per gallon, bottles and cases included.—[Advt.]

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

THE SHADY SIDE OF BRAIN WORK.

PAPERS ON DREAMS, MESMERISM, AND ALLIED TOPICS, BY VARIOUS WRITERS.

SIXTH PAPER.

THE PSYCHOLOGY OF SPIRITUALISM.

By Joseph Jastrow.

You believe that there will be an eclipse of moon when the astronomer predicts one, not because you can calculate the time yourself, or even understand how the astronomer does it, but because that is a technical acquisition which he has learned and you have not; and so with a thousand other and more humble facts of daily life. Spiritualism (to a large extent) comes under the same category; and the Seybert commission, and those other observers who have acquainted themselves with the possibilities of conjuring and the natural history of deception, who by their training and natural gifts have fitted themselves as competent judges of such alleged ultra-physical facts—these persons have the same right to our confidence and respect as a body of chemists or physicans on a question within their province. It is not fair to set up what you think you have seen as overthrowing their authority; even if you are an unprejudiced and accurate observer who has weighed the probability of your observations being vitiated by one or other of the many sources of error in such observation, it is only a small fact, though of course even that should be registered.

Whatever of seeming dogmatism there is in this view is removed by the experimental demonstration furnished by Messrs. Hodgson and Davey, that the kind and amount of mal-observation and faulty description which an average observer will introduce into the account of a performance such as the medium gives, is amply sufficient to account for the divergence between his report of the performance and what really occurred. The success of a large class of tricks depends upon diverting the observer's attention from the points of real importance, and in leading him to draw inferences perfectly valid under ordinary circumstances but entirely wrong in the particular case. It must be constantly remembered that the judging powers are at a great disadvantage in observing such performances, and that it is a kind of judgment in which they have no practice. In the intercourse of daily life a certain amount of good faith and confidence in the straightforwardness of the doings of others prevents us from exercising that close scrutiny and suspicion here necessary. We know that most of our neighbours have not the sharpness to deceive us, and do not live on the principle of the detective, who regards every one as dishonest until he has proved himself honest.

Mr. Davey (who, by the way, was at one time deceived almost into conversion by spiritualistic phenomena) is an expert amateur conjurer, and repeats the slate-writing performances of such as Englinton with at least equal skill. He arranged with Mr. Hodgson to give sittings to several ladies and gentlemen, on the condition that

the latter would send him detailed written accounts of what they had seen. He did not pose as a medium or accept a fee, but simply said that he had something to show which his sitters were to explain as best they could, and with due consideration of trickery as a possible mode of explanation. The "medium" has here a decided advantage over Mr. Davey, because he induces a mental attitude in his sitters that entertains (however remotely) the possibility of witnessing something supernatural, and this is sufficient to create an adjustment of the powers of observation less fitted to detect trickery than if the performer did not announce himself as the go-between of the supernatural. This is well illustrated in the reports of Mr. Davey's sitters, for a few friends who were told beforehand that they were to witness a sleight-of-hand performance, or were strongly led to believe it such, made much less of a marvel of the performance than those who had not been thus enlightened. It remains to add that not one of the sitters (and they were persons of decidedly more than average intelligence and ability) detected his *modus operandi*, and a large number concluded that trickery was utterly insufficient to account for the manifestations.

Mr. Davey's performances *as described* by many of his sitters, like the descriptions of the performances of many a medium, are marvellous enough to demand the hypothesis of occult agency: "Writing upon slates locked and carefully guarded by witnesses—writing upon slates held by the witnesses firmly against the under surface of the table—writing upon slates held by the witnesses above the table—answers to questions written secretly in locked slates—correct quotations appearing on guarded slates from books chosen by the witnesses at random, and sometimes mentally, the books not touched by the 'medium;' . . . messages in languages unknown to the 'medium,' including a message in German, for which only a mental request had been made, and a letter in Japanese in a double slate, locked and sealed by the witnesses, &c. And yet, though 'autographic' fragments of pencil were 'heard' weaving mysterious messages between and under and over slates, and fragments of chalk were seen moving about under a tumbler placed above the table in full view, none of the sitters witnessed that best phenomenon, *Mr. Davey writing*."

It must not be supposed that the errors of mal-description and lapse of memory thus committed are at all serious in themselves; on the contrary, they are mostly such as would be entirely pardonable in ordinary matters. Mr. Hodgson places them in four classes. In the first the observer *interpolates* a fact which really did not happen, but which he was led to believe had occurred. He records that he examined the slate, when he really did not. Or, for similar causes, he *substitutes* one statement for another closely like it; he says he examined the slate minutely, when he really only did so hastily. Thirdly, he may *transpose* the order in which the events happened, making the examination of the slate occur at a later period than when it really took place. Lastly, he may *omit* certain details which he was carefully led to consider trivial, but which really were most important. Such slight lapses as these are sufficient to make a marvel of a clever piece of conjuring; add to this the increased temptations for mal-observation afforded by the dim light and mysterious surroundings of the medium, as well as by the sympathetic attitude of the sitters, and the wide divergence between the miraculous narratives of spiritualists and the homely deceptions which they are intended to describe is no longer a mystery.

The conclusion thus experimentally arrived at by Messrs. Hodgson and Davey is corroborated by other investigators. After witnessing a *séance* that was simply a series of the simplest and most glaringly evident tricks, Mrs. Sidgwick was expected to have had all her doubts entirely removed, and was assured that what she had seen was better than the materializations at Paris. "Experiences like this make one feel how misleading the accounts of some completely honest witnesses may be; for the materializations in Paris were those which the Comte de Bullet had with Firman, where near relatives of the Count were believed constantly to appear, and which are among the most wonderful recorded in spiritualistic litererature. And, after all it appears that these marvellous *séances* were no better than this miserable personation by Haxby."

The Seybert commission finds that "with every possible desire on the part of spiritualists to tell the truth, the whole truth, and nothing but the truth, concerning marvellous phenomena, it is extremely difficult to do so. Be it distinctly understood that we do not for an instant impute wilful perversion of the truth. All that we mean is that, for two reasons, it is likely that the marvels of spiritualism will be, by believers in them, incorrectly, and insufficiently reported. The first reason is to be found in the mental condition of the observer; if he be excited or deeply moved, his account cannot but be affected, and essential details will surely be distorted. For a second reason, note how hard it is to give a truthful account of any common, every-day occurrence. The difficulty is increased a hundred-fold when what we would tell partakes of the wonderful. Who can truthfully describe a juggler's trick? Who would hesitate to affirm that a watch which never left the eye-sight for an instant, was broken by the juggler on an anvil; or that a handkerchief was burned before our eyes? We all know the juggler does not break the watch, and does not burn the handkerchief. We watched most closely the juggler's right hand, while the trick was done with his left. The one minute circumstance has been omitted that would have converted the trick into no trick. It is likely to be the same in the accounts of the most wonderful phenomena of spiritualism."

If we desire a concrete instance of this omission of an important detail, Dr. Furness will supply one. Certain highly intelligent observers describe to him the doings of a Boston medium: "There are two tables in the room of *séance*, at one of which sits the medium, at the other the visitor. The visitor at his table writes his question in pencil at the top of a long slip of paper, and, after folding over several times the portion of the slip on which his question is written, gums it down with mucilage and hands it to the medium, who thereupon places on the folded and gummed portion his left hand, and in a few minutes with his right hand writes down answers to the concealed questions; these answers are marvels of pertinency, and prove beyond a cavil the clairvoyant or spiritual powers of the medium." Dr. Furness went to the medium, prepared his slip of paper about as described, and thus continues: "As soon as he took his seat, and laid the strip on his table before him, I rose and approached the table so as to keep my paper still in sight; *the row of books entirely intercepted my view of it.* The medium instantly motioned to me to return to my seat, and, I think, told me to do so. I obeyed, and as I did so could not repress a profound sigh. Why had no one ever told me of that row of books?"

Before passing sentence one must hear what the defendant has to say. The usual defence consists in claiming that the conviction of fraud in some mediums does not

prove the absence of genuine phenomena in others. Some even claim, as we saw, that fraud and spirit manifestations can go hand in hand. Furthermore, they hold that the conditions for success demanded by the mediums, though they make the phenomena resemble a juggler's performance, are perfectly explicable on spiritualistic grounds. Writing is best produced in the dark because dark is "negative," light "positive," and negative conditions are most favourable to communication; if the spirit that appears resembles the medium, that is an effect of the materializing process; if writing does not occur when the slate is looked at, it is because the magnetism of the eye is unfavourable; and has not Dr. Slade received an express command from the spirits forbidding him, on penalty of cutting off all communication, to attempt to write on sealed slates?

In the first place, while it is not thus proved that every action of every medium is fraudulent, it makes it more and more probable, especially as the very conditions necessary for a serious investigation are denied on fanciful grounds. The fact that scientific examination everywhere reveals deception makes it extremely probable that, when exposure has not taken place, it is because there was no scientific examination. At any rate, the burden of proof is with the claimants for supernatural manifestations, and their case has now been so much weakened that it can no longer enter as a serious possibility into the minds of such as guide their beliefs by reason. Again, their "spiritualistic" explanations are simply violent assumptions, varying with the caprice and ingenuity of every medium, and evidently manufactured for the purpose. Even if such explanations were consistent, they would be possible only in that extreme sense in which any bizarre notion or fantastic hypothesis is possible. Practically, they are impossible, because contradictory to the fundamental tenets of science and experience; because they are opposed to that marvellous network of mutually corroborating laws and observations upon which the logic of civilization is founded. Those whose feelings are not appealed to by the doctrines of spiritualism will never be attracted by its logic.

A system that aims to instruct men with regard to beliefs appealing most earnestly and deeply to the human heart, appears in the light of scientific investigation as an empty, tottering framework, held together by the grossest frauds, covered over with the most vulgar sham, and embellished with the meanest kind of deception. Let each one leave as small or as large a margin for the possibility of a genuine spiritualism as to him seems fit, but let him realize in all its immensity the gross scandal to which this system has given and is giving rise. Let him understand that under the shelter of spiritualism men and women in all our large cities are daily and hourly preying upon the credulity of simple-minded folk, and obtaining money by means for which the law provides the jail. Let him know that there is now abundant evidence to make the term "medium" synonymous with "impostor." When these facts are clearly and universally recognized, we may hope to ascertain whether there is a true but small foundation-stone hidden beneath this rubbish-heap, or whether, like its equally pretentious predecessors, it leaves the mystery as unsolved as it found it.

Husband (to wife as they start out): "But aren't you going to wear anything on your head?" Wife (provoked): Why, you horrid thing, I've got on my Easter bonnet!" Husband: "You'd better wrap the bill around it, so as not to catch cold."

Public Health

"Health is the first Wealth."—*Emerson.*

THE IMPORTANCE OF SANITARY INSPECTION.

The importance of sanitary inspection is measured by the importance of sanitation itself. Whatever value is placed on sanitation, the same must be placed on sanitary inspection. There is no agency more productive of sanitary conditions than close sanitary inspection. In fact, it would be impossible to render the conditions of any locality sanitarily good without inspection. Sanitary science is not a blind science or any kind of guess-work. It does not grope about in the dark and expend its energies in a hit-or-miss fashion. It is an intelligent science, based on learning and proceeding on knowledge. It is not a clairvoyant or any impostor claiming to practice the occult. Relying on these sources it will fail, and the odours of death will stifle the air about it. Its success depends on the closest scrutiny and the minutest investigation of all things—a full acquaintance with the matters with which it has to deal and a detailed examination of the conditions confronting it.

Too often is this inspection deferred until some epidemic brings as a witness the mute evidence of death. Even then all the sanitation in the world cannot remove the cause until the cause is known. Inspection is the means by which this knowledge is brought to the sanitarian, and on this knowledge the proper regulations are enforced. No one will deny here the value of inspection and the absolute unreliability of all efforts in its absence. If inspection is of value in such cases, of how much more value is it when properly employed before the solemn warning of the desolation of disease is heard? Knowing its importance is so great, is it not strange that it is so infrequently employed? The failures of the efforts of the sanitarian and his partial failures are all due to the lack of timely and intelligent inspection.

The physician diagnoses a case before he applies a remedy. Did he not do so it would be a mere chance if he should not administer treatment that would be fatal. An unsanitary locality is a sick man, and he who attempts to administer a remedy without a thorough diagnosis will, unless by chance, augment the ills and multiply the dangers. Such practice is little better than that of the humbug who promises to locate disease and prescribe remedies on receipt of a lock of hair. This practice would be the extreme of quackery, and in so far as inspection is not thorough and complete, so far will all sanitation fail and bring upon the science reproaches which should go no farther than the official who has been derelict in his duties.

Regarding the value of sanitary inspection, Dr. Harrison Branthwaite, in his report on the Willesden district, says: "There can be no doubt as to the value of this particular work; its importance cannot be overestimated. Attempts to preserve health by the individual, however anxious he may be, are to a very considerable extent frustrated by those surrounding him. When we are brought face to face with the conditions against which he has to fight, arising from badly built property, the modes of drainage, the nature of many trades, the overcrowded houses, we cease to wonder at his inability to protect himself and secure health to his family. The habits and customs of others contaminate the surroundings, and, although a man may be ignorant of it, the conditions of his dwelling, from no fault of his own, may not only be unhealthy, but

SCOTCH TWEEDS

DIRECT FROM FACTORY.

If you want a really good ALL-WOOL SCOTCH TWEED, at Maker's Prices, in Worsted, Saxony, or Cheviot, *WRITE FOR PATTERNS.* All our own Manufacture. Any length cut. Splendid Selection. Tailors supplied with bunches of Patterns, Parties' own Wool made into Cloth. Heavy Tweeds, 1s. 9d. per WOOL. yard; Light Tweeds, 1s. 2d. per yard. Blankets, Rugs, Winceys, Flannel, &c. Carriage of Wool paid, and Patterns sent free.

IMPORTANT NOTE.—All Wools sent to be made into Heavy Tweeds, Blankets, Crumbcloths, &c.. &c., are made from two-ply yarns. This makes the Cloth finer and wear much longer than when it is done in the ordinary way. Cloth will be returned in One Month from receipt of Wool.

A. COLQUHOUN, Manufacturer,

GALASHIELS, SCOTLAND.

RESPECTABLE AGENTS WANTED IN EVERY DISTRICT NOT YET REPRESENTED.

THE PERFECT WATER FILTER

(HOWIE'S PATENT.)

CHEAP! EFFECTIVE!! AND EASILY CLEANED!!!

This Filter ceases to act when soiled, thus compelling people to clean it, which anyone can do in a few minutes; it is therefore

A SAFETY FILTER,

and not a delusion, as most Filters soon come to be.

J. & R. HOWIE, Hurlford, Kilmarnock, N.B.

Filters may be had at 15, GARLICK-HILL, LONDON, E.C. Wholesale Agents Wanted in Districts where none have been appointed.

SOLD BY ALL CHEMISTS, &C.

PERFECTED IN ONE OPERATION BY THE PROCESS INVENTED BY MÖLLER IN 1852. INCOMPARABLE, PALATABLE, PERFECT, PURE.

MÖLLER'S COD LIVER OIL.

OR SENT FREE BY PARCEL POST ONE BOTTLE 2/3, TWO BOTTLES 4/- BY PETER MÖLLER, 43, SNOWHILL, LONDON, E.C.

CAPSULED BOTTLES ONLY.

BE WARY OF RECENT IMITATIONS! SO EXTENSIVELY PUFFED NOW.

IS SIMPLY A *pure* OIL! IT CONTAINS NONE OF THE 50—60 PER CENT. OF WATER NECESSARILY IN EMULSIONS—

CHEAP COMMODITIES USUALLY CHARGED AT THE PRICE OF PURE OIL.

BE SURE YOU HAVE *NEW* OIL!

EVERY BOTTLE OF RECENT PRODUCTION HAS THE DATE PERFORATED ON BOTH LABELS.

ALLCOCK'S Corn Shield

GIVES CERTAIN RELIEF

THE BEST CORN PLASTER MADE

4/6 IRISH LINEN COLLARS.

Gent's Four-fold all Pure Linen Collars, all sizes and shapes, 4s. 6d per dozen. SAMPLE WHITE SHIRT, Linen Fittings, 2/6, 3/6, 4/6, 5/6, & 6/6 each, post free.

IRISH CAMBRIC POCKET HANDKERCHIEFS

Ladies' Size, 2s. 3d. per dozen. Gent's Size, 3s. 6d. per dozen. Samples of Linen Goods and Price Lists Free to all Parts. ALL PARCELS sent CARRIAGE PAID.—G. R. HUTTON & CO., Larne, Belfast.

Order "HEALTH" from your Newsagent.

TERMS OF SUBSCRIPTION.

Yearly, including home postage, postage to the Continent, Canada, or the United States, 10s. 10d.; Six Months, 5s. 5d.; Three Months, 2s. 8½d.

Cheques and Post Office Orders to be made payable to the Publisher A. P. WATT.

TOO FAT. DR. GORDON'S Elegant Pills

Cure STOUTNESS rapidly and certainly. State height, weight, and send 2/9, 4/6, or 11/-, to Dr. Gordon, 10, Brunswick Square, London, W.C.

Indigestion—Constipation.

DAHL'S DYSPEPSIA CAKES.

Recommended by several Medical Men.

"You know what Mignonette means in the language of flowers, 'Your qualities exceed your charms.' This applies to the Cakes."—J. Milner Fothergill, M.D. In Boxes, 1s., 2s. 6d. Powdered Cakes, for delicate cases, 2s. 6d.

"THE CHILDREN'S BREAD"—Special Brand for Children, 2s.

OF ALL CHEMISTS.

DAHL'S AGENCY, 41, EASTCHEAP, LONDON.

General Nursing Institute,

5 & 4, HENRIETTA-STREET,

COVENT GARDEN, LONDON, W.C.

Established 1862. Solely under Medical Direction.

HOSPITAL TRAINED NURSES for every description of disease—MEDICAL, SURGICAL, MENTAL, and MIDWIFERY—can be obtained at this Institute on application to the Secretary or Lady Superintendent at a moment's notice, being resident in the Home.

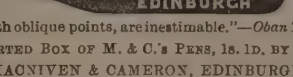
MALE ATTENDANTS and NURSES specially for FEVER cases.

Telegraphic Address, "Nursing Institute, London."

"They come as a boon and a blessing to men,
The Pickwick, the Owl, and the Waverley Pen."

THE HINDOO PEN.

(IN 3 GRADES.)



"With oblique points, are inestimable."—*Oban Times.*

ASSORTED BOX OF M. & C.'s PENS, 1s. 1D. BY POST.

MACNIVEN & CAMERON, EDINBURGH.

THE SAFEST TONIC.

Sold by all Chemists, in Bottles (in Portable Card Case) with Drop Measure complete.

Prices 3s. and 4s. 6d. Sufficient for 3 and 6 weeks' treatment respectively.

FER BRAVAIS.

All who want IRON should try it.

LANCET.—"'*Colloid hydrate (of iron) in aqueous solution.' Neutral, tasteless. A beautiful and interesting preparation.*"

BRITISH MEDICAL JOURNAL.—"*It has all the good effects of iron without producing constipation or disturbing the digestion, and it does not blacken the teeth.*"

In FLUID, POWDER, & SOAP.
Most Powerful, Lasting, and Non-Corrosive. Complete.

QUIBELL'S INFALLIBLE DISINFECTANTS.

Non-Poisonous.
Cheap and Effectual.

NEWARK, ENG.

CHATTO & WINDUS'S CHEAP EDITIONS OF POPULAR NOVELS.

PICTURE COVERS, PRICE TWO SHILLINGS EACH.

By JAMES PAYN.
Lost Sir Massingberd
A Perfect Treasure
Bentinck's Tutor
Murphy's Master
A County Family
At Her Mercy
A Woman's Vengeance
Cecil's Tryst
Clyffards of Clyffe
The Family Scapegrace
Foster Brothers
Found Dead
Best of Husbands
Walter's Word
Halves
Fallen Fortunes
What He Cost Her
Humorous Stories
Gwendoline's Harvest
£200 Reward
Like Father, Like Son
Marine Residence
Married Beneath Him
Mirk Abbey
Not Wooed but Won
Less Black than We're Painted
By Proxy
Under One Roof
High Spirits
Carlyon's Year
A Confidential Agent
Some Private Views
From Exile
A Grape from a Thorn
For Cash Only
Kit: A Memory
The Canon's Ward
Talk of the Town
Holiday Tasks

By GEORGE AUGUSTUS SALA.
Gaslight and Daylight

By E. C. PRICE.
Valentia
Mrs. Lancaster's Rival
Gerald
The Foreigners

By CHARLES READE.
It is never Too Late to Mend
Hard Cash
Peg Woffington
Christie Johnstone
Griffith Gaunt
Put Yourself in His Place
The Double Marriage
Love Me Little, Love Me Long
Foul Play
The Cloister and the Hearth
The Course of True Love
Autobiography of a Thief
A Terrible Temptation
The Wandering Heir
A Simpleton
A Woman-Hater
Singleheart and Doubleface
Good Stories of Men and Other Animals
Readiana
The Jilt

By Mrs. J. H. RIDDELL.
Her Mother's Darling
Prince of Wales's Garden Party
Weird Stories
Fairy Water
The Uninhabited House
The Mystery in Palace Gardens

By F. W. ROBINSON.
Women are Strange
The Hands of Justice

By JAMES RUNCIMAN.
Skippers and Shellbacks
Grace Balmaign's Sweetheart
Schools and Scholars

By W. CLARK RUSSELL.
Round the Galley Fire
On the Fo'k'le Head
In the Middle Watch
A Voyage to the Cape

By BAYLE ST. JOHN.
A Levantine Family

By JOHN SAUNDERS.
Bound to the Wheel
One Against the World
Guy Waterman
Two Dreamers
The Lion in the Path

By KATHARINE SAUNDERS.
Joan Merryweather
Margaret and Elizabeth
The High Mills
Heart Salvage
Sebastian

By GEORGE R. SIMS.
Rogues and Vagabonds
The Ring o' Bells
Mary Jane's Memoirs
Mary Jane Married

By ARTHUR SKETCHLEY.
A Match in the Dark

By T. W. SPEIGHT.
The Mysteries of Heron Dyke
The Golden Hoop

By R. A. STERNDALE.
The Afghan Knife

By R. LOUIS STEVENSON.
New Arabian Nights
Prince Otto

By BERTHA THOMAS.
Cressida
Proud Maisie
The Violin Player

By W. MOY THOMAS.
A Fight for Life

By WALTER THORNBURY.
Tales for the Marines
Old Stories Re-told

By T. ADOLPHUS TROLLOPE.
Diamond Cut Diamond

By ANTHONY TROLLOPE.
The Way we Live Now
The American Senator
Frau Frohmann
Marion Fay
Kept in the Dark
Mr. Scarborough's Family
The Land-Leaguers
The Golden Lion of Granpere
John Caldigate

By F. ELEANOR TROLLOPE.
Like Ships upon the Sea
Anne Furness
Mabel's Progress

By J. T. TROWBRIDGE.
Farnell's Folly

By IVAN TURGENIEFF, &c.
Stories from Foreign Novelists

By MARK TWAIN.
Tom Sawyer
A Tramp Abroad
A Pleasure Trip on the Continent of Europe
The Stolen White Elephant
Huckleberry Finn
Life on the Mississippi
The Prince and the Pauper

By C. C. FRASER-TYTLER.
Mistress Judith

By J. S. WINTER.
Cavalry Life
Regimental Legends

By H. F. WOOD.
The Passenger from Scotland Yard

The above is a Selection only. The Complete List of nearly FOUR HUNDRED NOVELS will be sent free upon application.

LONDON: CHATTO & WINDUS, PICCADILLY, W.

INTERESTING ARTICLES.

SETS of the BACK NUMBERS of "HEALTH," containing completed Serial Articles on various important Health Topics, may be had on remitting cost of the numbers and stamps for postage.

The following subjects are treated:—

SHALL I SMOKE? In No. 231.
IS SNUFF-TAKING UNHEALTHY? In No. 218.
SOME HINTS FOR THE CURE OF FATNESS. In Nos. 213, 225.
PALPITATION AND ITS TREATMENT. In No. 216.
SCARLET FEVER. In Nos. 220, 230, 232.
DRESS AND UNDRESS. In Nos. 216, 217.
NURSING. In Nos. 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219.
HATS AS A CAUSE OF BALDNESS. In No. 215.
HOUSE CONSTRUCTION IN RELATION TO HEALTH. In Nos. 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234.
HEALTHY HOLIDAYS. In Nos. 223, 224, 225, 226, 227, 229, 230.
SLEEP WALKING. In Nos. 72, 73, 74, 75, 77, 79, 80.
INFANTS. In Nos. 100, 101, 102, 103, 104, 105, 106, 107.
PHYSICAL TRAINING FOR CHILDREN. In Nos. 94, 95, 96, 97, 98, 118, 119, 120, 121, 122, 123.
TRICYCLES, AND THEIR RELATION TO HEALTH. In Nos. 61, 63, 64, 65, 66, 68, 70, 71, 73, 74, 76, 78.
DIGESTION. In Nos. 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105.
WHAT TO DO WHEN FEVER INVADES THE HOUSE. In Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11.
THE HAIR, SKIN, AND TEETH. In Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14.
BURIED ALIVE. In Nos. 154, 155, 156, 157, 158, 159, 161, 163, 164.
HYDROPHOBIA: ITS NATURE, CAUSES, AND TREATMENT. In Nos. 20, 21, 23, 24, 25, 26.
CALISTHENICS. In Nos. 44, 45, 46, 47, 48, 49, 51, 52, 54, 59, 61, 62.
ECONOMICAL MEALS. In Nos. 48, 49, 50, 51, 52, 53, 54, 55, 56.
PUBLIC PARKS AND OPEN SPACES. In Nos. 57, 58, 60, 62, 64, 66, 71, 74, 76.

The price of numbers 1–156 has been increased to 4d. each, as, in consequence of the great demand for them, they are now nearly out of print. Nos. 157 to date may be had, price 2d. each.

LONDON: A. P. WATT, 2, PATERNOSTER-SQUARE, E.C.

SEVENTEEN GOLD, SILVER, & BRONZE MEDALS.

WM. WOOLLAMS & CO.,

ORIGINAL MAKERS OF GUARANTEED

NON-ARSENICAL WALL PAPERS.

TO BE OBTAINED OF ALL DECORATORS.

Manufactory and Sole Address:

110, HIGH STREET
(Near Manchester-square),
LONDON, W.

NOTE TRADE MARK.

Demy 8vo, with One Plate, price 1s.

BOARD SCHOOL LARYNGITIS.

BY

GREVILLE MACDONALD, M.D. Lond.,

Physician to the Throat Hospital, Golden-square, W.

London:
A. P. WATT, 2, PATERNOSTER-SQUARE.

TOWLE'S

Pennyroyal & Steel Pills

FOR FEMALES

Quickly correct all irregularities and relieve the distressing symptoms so prevalent with the sex. Boxes, 1s. 1½d. and 2s. 9d., of all Chemists. Sent anywhere for 15 or 34 stamps, by

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

BEWARE OF IMITATIONS.

incompatible with life. It is here that the value of 'inspection' makes itself felt, inasmuch as, by stringent action, when insanitary conditions are observed, it regulates the conduct of individuals toward each other, and is binding upon all alike. It is a lamentable fact that, notwithstanding the great improvements of recent years, a large number of our population still dwell in a condition of misery and social degradation. Early marriages without means of any kind result in numbers of badly nursed children; children born and reared in filth and abominations, with which we are all of us too familiar, and if such children survive at all it is to grow into stunted and diseased men and women. This is the class who will benefit most by the visit of the sanitary inspector. It seems at first sight a sphere of labour the most barren, the most hopeless, and the most disheartening, but perseverance in the work must in the end be productive of good."

Dr. S. W. J. Evans, medical officer of Wrexham, reports most favourably on the public health of the town during the year 1888, and the excellence of its sanitary arrangements. There were no deaths from small-pox, typhus, or typhoid during the year. The death-rate was 18·2 per 1,000, compared with 20·7 in 1887.

Exposition Universelle de Paris.—Messrs. Wm Woollams & Co., manufacturing paperstainers of 110, High-street (near Manchester-square), London, W., the original makers of non-arsenical wall-papers, have the honour to invite attention to their exhibits, in the General Industries Court of the British Section, consisting of a great variety of wall and ceiling papers, Raised Flocks for painting over, Patent Embossed Flocks (finished without painting over) in which the design is in high relief richly modelled, and "Coriacene," a new imitation of embossed leather, in which the raised surface is hardened by a special process, so that it resists the softening action of the paste, and can be hung without any loss of relief. In addition to the papers shown at their own stand, Messrs. Wm. Woollams & Co. have manufactured and supplied for part of the vestibule to the British Section a handsome Elizabethan pattern, called the "Queen Bess" (No. 17824), designed expressly for the purpose by J. A. Gotch, Esq., F.R.I.B.A., and worked in shades of ruby flock, the frieze having a gilt ground; and they also exhibit in this vestibule two framed specimens of wall-papers (42-in. repeats), the "Richardson," designed by A. F. Brophy, Esq., (No. 17825), and the "Rialto" (No. 17826), designed by Miss L. Aumonier. Messrs. Wm. Woollams & Co. also desire to call attention to the fact that they print the beautiful set of private designs issued by Mr. J. Aldam Heaton, which they are authorized to sell on his account to the trade. All colours used in the above-mentioned papers are free from arsenic. Pattern books by other makers are in circulation closely resembling those of Messrs. Wm. Woollams & Co. In some cases the cloth in which the books are bound is of similar colour, in other cases the *numbers* and *names* of the patterns are the same, although the designs are utterly different, so that the greatest care is needed to prevent mistakes. Messrs. Wm. Woollams & Co., therefore desire to call especial attention to their "Trade Mark" (a bale of wool branded W and two lambs suspended), to counterfeit which is felony, stamped upon the back of all their patterns, as it affords a reliable means of identifying their designs.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Scarlet Fever.—At the annual meeting of the Rhode Island Medical Society, Charles V. Chapin, M.D., the health officer of Providence, read a most valuable paper on the method for the prevention of scarlet fever. In speaking of the origin of the disease, he said that where and when scarlet fever first appeared is not known, but it has certainly prevailed continuously in Europe since the middle ages, and thence has spread to many other parts of the world. In 1735 it first appeared in this country at Kingston, Mass. It quickly broke out in Boston, a little later in New Hampshire, and gradually within a few years spread over New England, reached New York, and appeared in Philadelphia in 1746. Thence it extended down the coast, and passed over the Alleghanies into Kentucky and Ohio in 1791 and 1793. In 1851 it appeared in California. It was carried to New Zealand and Australia in 1848. During the first part of this century it was imported into Madeira, where it disappeared in 1814, only to reappear in 1824. In South America it is said to have been prevalent in 1796, but became extinct, and appeared again in Chili in 1829, and in 1831 in Buenos Ayres, whence it spread in 1832 to Brazil. It first appeared in Iceland in 1827, in the Bahamas in 1845, and it was carried to India in a transport-ship in 1870. We know that the aborigines of Africa, North and South America, and Australasia were entirely exempt from this disease until the advent of Europeans. We know also that the early settlements were exempt often for many years, and we know that, in some cases at least, the direct transportation of the disease can be traced. These general facts, taken by themselves and without the corroboration of other testimony, show almost conclusively that scarlet fever must be due to a material poison introduced from without the body, which poison must be intimately associated with the bodies of the sick. The hypothesis that the disease can be due to any atmospheric or telluric conditions is absolutely untenable. We should cease to talk about mysterious epidemic influences. Specific, by which is meant infectious, diseases can only be caused by specific poisons; and, though obscure meteorological conditions may favour or hinder the development and spread of these poisons, they cannot produce them. If scarlet fever can be carried in ships half round the globe, or in emigrant trains hundreds of miles across uninhabited continents, and, set free at the journey's end, spread without hindrance, it must be caused by a specific poison. He refers to the work which has been done by Ecklund, Klein, Edington, and others in the search for the germ of the disease, and comes to the conclusion that it has not as yet been discovered. Extended reference is made to the investigation which was made by *Science* in 1887 and 1888. He summarizes our knowledge of scarlet fever in saying that it is a contagious disease, the virus of which behaves exactly as if it were a living organism; that it probably does not develop outside the living body; it is probably received through either the alimentary or respiratory mucous membrane; after a brief incubation, the disease is established, and the poison is thrown off from the mucous and cutaneous surfaces as long as inflammation exists or desquamation continues, and is thus

disseminated in the air and attached to various articles, is carried from place to place, retaining its vitality for many months. For the prevention of the spread of the disease, he recommends that the patient be isolated, that a sheet wet with corrosive sublimate be hung before the door of the room which he occupies; that the patient be thoroughly anointed, including his head, morning and night, with the following, advised by Jamieson:—Carbolic acid, ten to thirty grains; thymol, ten grains in an ounce of ointment. Where it becomes necessary, and hospitals exist, patients should be removed to these institutions. At the close of the sickness, every thing should be disinfected. Dr. Chapin concludes his paper by quoting statistics from the report of boards of health, especially those of Massachusetts and Michigan, which demonstrate that sanitary measures have greatly reduced the prevalence of the disease.—*Science*.

✣ ✣ ✣

Shop-window Cures.—Corns and bunions demand a good deal of attention. There are many kinds of corn plasters and several "miraculous cures," which are all "painless, simple, and speedy," and which secure "ease, comfort, and good-temper." One proprietor of a miraculous cure is so enthusiastic that he breaks out into doggrel—

> If corn or bunion trouble you, of this you may be sure,
> That free from pain you soon will be by using ——'s cure.

After this the man who merely advertises a corn rubber is nowhere. We were, however, under the impression that corns originated from pressure or friction, and that the only radical cure was removing that pressure or friction after the corn, if very large, had been taken out. Toothache, being so common, has, of course, a number of cures. A sufferer would dare a good deal to appease the hideous throes of toothache, and when plaintively asked, "Why suffer from toothache when you can cure it by using the toothache pencil?" would certainly try this, that, or the other remedy before facing the dentist. But, alas! the dentist's chair is the ultimate fate of the person with an aching tooth, and he may be happy if on leaving the dentist he carries his tooth—in his jaw—along with him. Nervous debility seems almost as responsible as toothache or corns for certain cures. Among the hundreds of medicines devoted to nervous debility there are "best brain tonics," "botanic pick-me-ups," "golden medical discoveries," "damiana wafers," and "syrups" of all kinds. Liver complaints and digestive imperfections are also well supplied. "Candies" and "jujubes," *cum multis aliis*, are all very good for liver and digestion—at least so say the proprietors. There is one advertiser who, having announced, "remove the cause and the effect will cease," soars boldly above his compeers, and announces "head, stomach, and liver pills!" It is, however, in the domains of surgery that shop-window cures are most pronounced. "Another leg saved!" "Another hand saved!" "Another toe saved!" by a certain ointment and pills is boldly announced. If all is correctly stated with reference to this new ointment and pills, Professor Holloway is outdone. Cancers are exhibited, diseased bone is shown, and corns are produced, all cured by this wonderful ointment. Bills are also distributed purporting to be the history of cures. One begins, "A boy threw a stone and hit him on the finger over six years ago." The remainder of the account may be transferred into, "Affliction sore long time he bore, physicians were in vain," until he was cured by the pills and ointment. Now this was evidently a case of scrofulous disease of the bones, always most tedious, and recovery *post* is not *propter*. We close the list by mentioning first "Oriental pills." Why they are called Oriental pills we do not know, and what they are for we cannot ascertain. The name is curious, for pills in the East, unless introduced by Europeans, are as rare as snakes in Iceland. And, secondly, a cure for chilblains called "Chimethloplastron!" What it means we do not know. And we do not take to it—for the word does not come trippingly from the tongue like the blessed Mesoptamia. It has been said that faith in the doctor is half the battle. Shop-window cures, however, require more than faith; they demand credulity. Nothing catches a man more than a pretended confidence; and of this among vendors of medicines, patent or not patented, there is no lack. It is astonishing how one is able to persuade oneself into a belief in accordance with one's wishes. Barnum's definition of a humbug was "a man who gives you your money's worth, but induces you to deal with him by some plausible tale connected with his goods." Shakespeare asked, "Can'st thou not cleanse the stuffed bosom of that perilous stuff which bears upon the heart?" This is not to be done by nostrums, and not always by doctors. Notwithstanding the vigorous declarations of vendors of nostrums, they do not appear quite sure of themselves; for the names of eminent medical men are freely used—among others, those of Brodie, Blundell, Jenner, Clark. This recalls to mind an anecdote of the Duke of Wellington and Dr. Locock. Meeting one day, the Duke said, "Confound you, Locock! I've almost poisoned myself by taking your pulmonic wafers!" "Ah!" answered Locock, "and I have lamed myself by wearing Wellington boots!"—*Globe*.

Fires in Frosty Weather.—There are several reasons why a fire burns so brightly in frosty weather. First, the air being cold is denser, and the heated air and gases from the fire are comparatively more buoyant, consequently there is a greater draught. Then the air, being denser, contains more oxygen in an equal volume, and that gas being quickly supplied, the combustion is fiercer and more perfect. In frosty weather, also, the atmosphere is comparatively free from moisture, which, of course, has a tendency to damp a fire.

Composition of Celluloid.—Most celluloid is made in France. A roll of paper is slowly unwound, and at the same time is saturated with a mixture of five parts of sulphuric and two parts of nitric acid, which falls upon the paper in a fine spray. This changes the cellulose of the paper into pyroxyline (gun cotton). The excess of the acid having been expelled by pressure, the paper is washed with plenty of water until all traces of acid have been removed. It is then reduced to a pulp, and passes on to a bleaching trough. It is this gun cotton which gives it its explosive nature. Most of the water having been got rid of by means of a strainer, it is mixed with from twenty to forty per cent. of its weight of camphor; a second mixture and grinding follows. The pulp is spread out in thin slabs, which are squeezed in a hydraulic press until they are as dry as chips. Then they are rolled on heated rollers, and come out in elastic sheets. They are from that point worked up into almost every conceivable form. In Paris there is a room almost completely furnished in celluloid. The curtains, the furniture, the door-knobs, and even the matting are made of this material. To be sure, no matches are ever carried there. Indeed, the room is never used. It is only a curiosity, and the man who owns it owns the factory where it was made.

Sanitary Appliances, Etc.

THE PATENT NEBULIZER.

The Patent Nebulizer is an appliance due to the discovery and research of Dr. Lighthill, an eminent Boston physician. The patent rights for the United Kingdom have been purchased by Mr. A. E. Holt, of 74, Fleet-street, E.C. By the aid of this invention any liquid remedy can be instantaneously converted into a "nebula" or vapour so extremely delicate and dry that it remains suspended in the air like smoke or fog, and can be inhaled into the lungs as readily as the air itself. This process of transformation is accomplished by simple mechanical means, and does not change in the least degree the nature or strength of the remedy employed; so that, for the first time in the history of medicine, we possess the means of reaching the lungs and air-passages with the remedy of our choice in its full medicinal power, and have gained a step in advance which will be of incalculable benefit to the human race. Attempts have been made to reach the lungs and lower air-passages by *atomized spray*, but it has been found that it never reaches beyond the upper cavity of the throat, where it at once condenses into a liquid which cannot even pass the epiglottis (or lid of the wind-pipe) without creating distressing cough and a feeling of suffocation. But by Dr. Lighthill's invention the appropriate remedy can be conveyed by the simple process of inhalation to the finest ramifications of the bronchial tubes and air cells of the lungs, where it can be retained without the slightest discomfort or distress as long as the breath can be held, subjecting the diseased tissues to remedial contact as long as it may be deemed advisable.

Considering the fact that every medicine in a liquid form can be applied by this process directly to the lungs and lower air-passages, consumption and bronchial affections come at once within the range of curable diseases; for appropriate remedies can thus be locally applied to the very seat of the disease, to remove inflammation, heal ulceration, arrest hæmorrhage, quiet distressing cough, and promote the absorption of tubercular deposits. With such advantages at our command it is possible to effect complete cures in all cases where disorganization has not extended too far, and even in advanced cases of consumption life can be prolonged, and the patient can be made more comfortable and kept in a relative state of fair health. With equal facility and advantage can the Nebulized Remedies be applied to the nasal passages and the various cavities of the head with which they are connected. In the majority of cases these little air-cells of the head form the real stronghold and hiding-place of catarrh, and as they are utterly beyond the reach of the ordinary local applications, the rebellious nature of catarrh is easily explained. It will be good news to thousands of sufferers from this pernicious complaint to learn that through the means of this invention these sinuses can be reached as readily as the nasal passages themselves, because the nebulized vapour is so fine that it penetrates to the remotest recesses of the head as easily as the very air. When introduced into one nostril it will escape from the opposite one, or from the open mouth, like cigarette smoke, impressing its healing effects on every portion of the mucous membrane, without the slightest pain, irritation, discomfort, or distress.

In chronic ailments of the throat characterized by excessive secretion of phlegm, persistent hoarseness, pain, irritation, or cough, this treatment acts promptly and affords the most happy results, removing the diseased condition, and imparting clearness and strength to the voice. Being enabled to introduce whatever remedy experience may dictate within the larynx with perfect comfort, ailments heretofore beyond the scope of local applications come within our reach, and many diseases can thus be cured in their earlier stages which otherwise might become serious and even fatal, chief among which might be named laryngeal consumption and cancer. From the very beginning of the inhalations of appropriate remedies in a nebulized form the breathing becomes easier, expectoration is promoted, the bronchial tubes become free, patients are able to lie down and sleep quietly, and in time a permanent cure is effected. Patients suffering for thirty years and more from asthma in its most distressing form have in this way been entirely and permanently cured after hope had been abandoned.

Of equal benefit is this method of treatment in the cure of deafness and diseases of the ear. The tympanic cavity, which is the seat of nearly all the diseases detrimental to hearing, was heretofore beyond the reach of any direct treatment except the inflation of air, but we have now the means to introduce into this cavity any remedy which its diseased condition may demand, and that in a form so attenuated and delicate that it produces its happy effects without the least pain or unpleasant sensation. We shall look with interest for reports from the medical faculty regarding the success of this invention.

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

Health, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the Publisher, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain Health from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following Free Gifts and Bonuses to all who subscribe to Health for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of Health, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of Health weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of Health so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of Health, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to Health, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with Health should be addressed directly to the Publisher, 2, Paternoster-square, London, E.C., and *not to the Editor*.

Clean beets nicely, but do not pare them, leaving on a short piece of the stalk to retain the colouring and sweet juices of the vegetable. Young beets will cook tender in an hour; old beets require several hours' boiling. When done, skin quickly while hot, slice into your vegetable dish, put on salt, pepper, and a little butter, and they are then ready for the table.

The Electric Age.—Professor Elisha Gray remarks that electrical science has made a greater advance in the last twenty years than in all the 6,000 historic years preceding. More is discovered in one day now than in a thousand years of the middle ages. We find all sorts of work for electricity to do. We make it carry our messages, drive our engine, ring our door bell, and scare the burglar; we take it as a medicine, light our gas with it, see by it, hear from it, talk with it, and now we are beginning to teach it to write.

"ELECTRICITY IS LIFE."
(TRADE MARK.)

PULVERMACHER'S

WORLD-FAMED

GALVANIC BELTS,

FOR the CURE of NERVOUS DISEASES,
HAVE RECEIVED TESTIMONIALS from
THREE PHYSICIANS to
HER MAJESTY the QUEEN,
THE ACADÉMIE DE MÉDECINE of Paris and
FORTY MEMBERS of the
ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM *v.* NERVOUS DEBILITY.

30, Mary-street, Southsea, May 11th, 1889.

Dear Sir,—It is with much pleasure I write to say that since wearing your Galvanic Belt a most remarkable improvement has taken place in my health, and nearly all the old symptoms I was suffering from have vanished, for which I feel very grateful. Many thanks for your kindness in my case, and wishing you every success.—Yours respectfully, C. TINGEY.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* PARALYSIS AND SCIATICA.

40, College-road, Bromley, Kent, May 8th, 1889.

Gentlemen,—I am very pleased to give you a testimonial for your Electric Belt. I bought one of you in January last, when I was suffering from sciatica and slight paralysis, and after wearing it for two weeks I was greatly relieved, and in three months' time I was completely cured.—Yours very truly,

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W. W. HOLMES.

GALVANISM *v.* LOCAL WEAKNESS.

Cornerville, Buncrana, Co. Donegal, May 1st, 1889.

Gentlemen,—I have very much pleasure in recommending your Galvanic Belt and Chain Battery for the cure of extreme local weakness and debility, and you are at liberty to make use of my name and address.—Yours faithfully, C. H. COCHRANE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

28, St. John-street, Newport Pagnell, April 29th, 1889.

Dear Sir,—I am pleased to say that to me your invention of the Galvanic Combined Bands is invaluable. Having worn them with so much benefit, I can bear testimony to their comfort and support.—Yours truly,
(Mrs.) A. F. COOCH.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* RHEUMATISM & NERVOUS DEBILITY.

Erin Manor, Burgess-hill, April 27th, 1889.

Dear Sirs,—I have great pleasure in informing you that the Galvanic Belt I got from you last January for my old gardener has been of the greatest benefit to him; he now sleeps well, his appetite is good, and he has greatly increased in flesh. Under God's blessing your Belt has been the means of restoring this poor man to health, and he is now able to resume his work, even to stooping and digging, neither of which he has been able to do for the last five years.—Yours faithfully,
W. R. E. ALEXANDER, Major-General.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* LIVER COMPLAINT, INDIGESTION, AND CONSTIPATION.

High-street, Woolwich, April 25th, 1889.

Gentlemen,—Some years ago I was suffering from liver complaint, indigestion, constipation, &c., till my life was almost a burden to me. I could get no relief until I purchased one of your Galvanic Belts, and after a short time I was completely cured, and, thank God, the cure was permanent, for I have never had the slightest return of my old complaint. I can safely recommend your treatment to anyone suffering from dyspepsia and weakness of the stomach.—Yours respectfully, A. SIMMONS.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS DEBILITY.

3, Baltic-place, St. Luke's, E.C., 8th April, 1889.

Gentlemen,—In reply to your kind inquiries as to the efficacy of your Galvanic Bands, I am pleased to state that your treatment in my case has been entirely successful, and if I may judge by my feelings at the present time it is a permanent cure.—Yours truly, S. WILTSHIRE.

Messrs. Pulvermacher & Co., 194, Regent-street.

GALVANISM *v.* NERVOUS EXHAUSTION.

The distressing symptoms of Nervous Exhaustion and Debility are speedily removed by means of PULVERMACHER'S world-famed GALVANIC BELTS, which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

ADVICE PERSONALLY or by LETTER, free of charge.

FOR FURTHER TESTIMONIALS, both Medical and Private, see new Pamphlet, "GALVANISM: NATURE'S CHIEF RESTORER OF IMPAIRED VITAL ENERGY," post free on application to

J. L. PULVERMACHER AND CO.,
GALVANIC ESTABLISHMENT,
194, REGENT-STREET, LONDON, W.
(ESTABLISHED OVER FORTY YEARS.)

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

MIGNON.—See advice given to "Grange" in the present number.

B. MCKENZIE.—Any tonic of the kind you name is not adapted for a person troubled with piles, on account of its tendency to cause constipation. You should try Bayley's Cure for Piles (17, Cockspur-street, London, W.); and for the symptoms you complain of, use an injection of pure Hazeline. See that you avoid constipation by the use of the remedies recommended to "Star" in the last number of HEALTH.

F. L. B.—1. Use Vinolia Soap and take a Turkish bath once or twice a week for a few weeks. You should limit your flesh food, and take plenty of vegetables. 2. Try the Wyeth's Dialysed Iron, by all means; but you should take no iron at all so long as your present symptoms continue.

J. T. H.—Use a Burroughs' Chloride of Ammonium Inhaler. This will probably aid your cure more effectually than any other means. Obtain the Inhaler from your chemist; or apply to Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C.

TONA.—Take a teaspoonful of Inman's Syrup of the Hypophosphites (advertised in our pages) twice daily, after your meals, in a wineglass of water.

NASAL CATARRH.—See advice to "J. T. H." above.

DIEGELER.—Apply to any wholesale firm of druggists. Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C., may be able to answer your query. As far as we understand your inquiry, sulphonal, in a ten-grain dose, taken at night, would suit you as well as the drug you name.

W. R—D.—Try the tonic recommended to "Tona" in the present number.

GRAHAM.—There is no danger in giving the children plenty of fresh air. You are wrong entirely if you object to such a reasonable and healthy proceeding.

JAMES GALLOWAY.—Try the effect of giving hot salt water applications to the affected parts each night, and give ten grains of antipyrin in water (or two five-grain tabloids of antipyrin, Burroughs, Wellcome & Co.'s) every four hours when the pain is severe. If these measures fail to give relief, you should consult an Edinburgh surgeon, and take his opinion on the case.

ART.—[Not so many queries at one time please, on another occasion].—1. Read HEALTH, No. 199, and note what is said therein about acne and its treatment. 2. Your question is utterly foolish. 3. We are not drapers, and do not profess to estimate the cost of materials. In the one breath you ask a question about consumption, in the other you enquire about a suit of clothes for running. Assuming the case to be your own, we must request you in future to be a little more considerate of our time and patience. 4. Ask a surgeon. 5. Read the articles published in HEALTH (to be had from the Publisher) entitled, "How to Get Thin or Fat."

TWO YEARS' SUBSCRIBER.—Apply Vinolia (Roberts & Co., 76, New Bond-street, London, W.) to the irritated parts, and wash them with Vinolia Soap morning and night.

W. E. V.—Follow the advice given to "Irritated One" in the present number of HEALTH. Wash the parts with Vinolia Soap before applying the ointment—see advice given to "Two Years' Subscriber" above.

A. B.—We should recommend you to stay at Buxton for a time; if that place does not agree with you, go to the seaside (*e.g.*, Eastbourne or Bournemouth). Yours is not a case for drugs. Fresh air and moderate exercise with judicious feeding will cure you. Try twenty drops of Fer Bravais, after meals, in water, thrice daily.

A SPENCE.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and attend to the directions there given as to tonics and cold sponging each morning.

IRRITATED ONE.—For the body-irritation, try the following ointment:—Resorcin, one drachm; lanolin, zinc oxide, and powdered starch, of each, two drachms. Mix. Label: "Apply night and morning." Use Bayley's Spermaceti Soap.

GRANGE.—A depilatory is made as follows:—Sulphide of sodium, three drachms; lime, ten drachms; starch, ten drachms. Make a paste with water; apply to the skin for two minutes only; then scrape off. To be used with care. No depilatory will prevent the hairs from growing again. Electricity alone can permanently remove hairs. Send stamped addressed envelope for address of specialist. See article in HEALTH, No. 149.

F. R. B.—To make a shampoo liquid, try the following:—Soft soap, half an ounce; powdered borax, one drachm; ammonia, one drachm; eau de Cologne, half an ounce; boiling distilled water, twenty ounces. Dissolve the soft soap and borax in the water, and when cold add the ammonia and eau de Cologne.

BOTANIST.—Take twenty drops Cascara Cordial twice daily occasionally as a corrective to your digestive troubles. Avoid late suppers; give up all stimulants; and try Grant's Oat Flour for breakfast and supper. Tea and coffee are to be avoided till you recover your health.

LESBIA.—Apply to the French Hygienic Society, 6, Conduit-street, London, W., and try their hair-preparations. Continue the Fer Bravais, but a change of air would be likely to be of great benefit to you.

ELLEN FAREHAM.—You seem to suffer from congenital hair-weakness by your own account. When you are next in London you should consult a good physician. We can send you address of such, if desired, on receipt of stamped addressed envelope.

APPLE.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and note what is said regarding the use of tonics therein. Take a cold bath in the morning, and use brisk friction with a hard towel.

M. D.—Use Mellin's Food and milk only for the child until he is at least eight or nine months old, and give no starchy foods till the latter age is attained. Use this Food as directed on the tins. It is the only safe food for young infants. The child is far too young for farinaceous foods.

PEEBLES.—Apply a little boracic ointment to the sore night and morning. For the constipation, take twenty drops of Cascara Cordial, or two Cascara Tabloids, each night; and use Dahl's Cakes regularly with your breakfast and tea (see advertisement in our pages). Let your diet also be largely of vegetable nature for a time.

E. BAYNE.—Try taking two tabloids of Antipyrin (Burroughs, Wellcome & Co's) every two hours when your headache is present, until six tabloids have been taken. This dose may be repeated once daily, but not oftener.

CICERO.—Take Cascara Cordial in doses of twenty drops in water, between meals, once or twice daily. Eat stewed fruits, vegetables, and whole-meal bread; and avoid tea and coffee.

GENT ALL.—We have already expressed our opinion of the preparations you name in HEALTH. We believe them to be perfectly safe and reliable.

D. MURRAY.—The following hair-lotion should be tried: Quinine sulphate, twenty grains; glycerine, one fl. ounce; Cologne, two fl. ounces; bay rum, two fl. ounces; rose water, eleven fl. ounces. Rub the quinine with the glycerine, and add the other ingredients in order named. The addition of fluid extract of jaborandi is recommended to stimulate the growth. Keep the hair short, and wash it once a week with Iodoform Soap and tepid water.

A. SLOAN.—Wash the face with Iodoform Soap, and apply a little eau de Cologne after washing. Press out the blackheads. Vegetarian diet should certainly be tried, but not as an exclusive food.

R. Y.—Try fifteen drops Fer Bravais, thrice daily, in water, after your meals. This will restore your tone, the loss of which is due possibly to overwork or want of exercise.

GLADYS.—Try the following mixture:—Carbonate of ammonia, one drachm; bicarbonate of potass, a drachm and a half; infusion of chiretta, six ounces. Mix. A tablespoonful thrice daily before food.

E. JUDGE.—Avoid constipation by vegetable diet, and a dose of Lamplough's Pyretic Saline occasionally. Rest as much as possible; bathe the parts with warm water morning and night, and apply thereafter a little extract of belladonna as an external ointment. Wear a suspensory bandage.

G. R. ELDER.—Mr. Pulvermacher will advise you on the matter. Write to him direct.

A. H. PRAIN.—1. Apply to the Medical Battery Company, 52, Oxford-street, W., and see what they say regarding the suitability of the Zander treatment for your case. 2. Try hot and cold douches alternately played on the joint night and morning.

DISTURBED.—A case like yours can only benefit by the exercise of your will-power. You know you are a nervous subject, and you know you are a healthy person; and with these facts before you it should be easy for you to get rid of your hypochondriacal feelings. Physically we advise you to take plenty of out-door exercise; try cycling; mix in cheerful society; and, in a word, try to forget your fancied troubles in the reality of exercise and work.

MOTHERWELL.—Rest after meals rigidly; let your food be of light character; avoid cheese, pastry, and salt foods; and if the pain you describe persists, take five drops of Pure Terebene on a piece of sugar, after your meals. Avoid constipation by following advice given to "Peebles" in the present number.

BOOKWORM.—You may try the remedy you name. If not successful, write again, and we will advise you further.

A. J. WOODWARD.—See advice given to "R. H. Posnett" in HEALTH No. 319 regarding the feet. It is probable your boots are at fault. Wear large and roomy shoes; and if the corns trouble you, consult a chiropodist, and have them removed.

ANTONY.—You do not state your symptoms exactly; but judging from your letter, we should say there is nothing the matter with you. Unless you specifically state what you mean by "inflammation," we cannot assist you; but there seems to be nothing the matter which washing the parts night and morning with soap and tepid water will not remove. You will be an extremely foolish youth if you neglect to see a doctor, that is when you happen to be really ill. Do you suppose doctors do not see hundreds of cases like yours? If you write again, be more specific in describing your case.

RUFUS SWALLOW.—With the medical opinion you had we do not agree at all. You should take the exercise you name whenever you feel disposed, but not exceeding say twice or thrice a week. Your own feelings are your best guide in the matter.

X.—Use Vinolia (Roberts & Co., 76, New Bond-street, London, W.) as an application to the affected parts, and wash them with Vinolia Soap. Let your diet be light and nutritious; but avoid excess of potatoes and vegetables. Drink La Bourboule Water (advertised in our pages) as a remedy likely to do your skin-trouble good, to be had of Messrs. Ingram & Royle, 52, Farringdon-street, London, E.C.; and write again if not cured.

B. A.—We cannot answer your question or advise you unless you specify the kind of worms you mean. Do you mean tape-worms, or thread-worms, or round-worms?

G. H. P.—Your error consists in your using tonics, when evidently you do not require them. We advise you to give up taking drugs, and to attend to your food and to exercise. Rest after your meals, but take plenty of out-door exercise, with a cold sponge-bath each morning. If at any time you require a tonic (and you should only take it when necessary), try Inman's Syrup of the Hypophosphites—a teaspoonful in a wineglass of water, after meals, thrice daily.

A Tonic

Horsford's Acid Phosphate.

A most excellent and agreeable tonic and appetizer. It nourishes and invigorates the tired brain and body, imparts renewed energy and vitality, and enlivens the functions.

Dr. James Black, L.R.C.S., Primrose-hill, Cockburnspath, Scotland, says:—"As a nerve tonic, I know nothing like it. It gives me great satisfaction."

Dr. Thomas Davidson, L.R.C.P. & S., Gosforth, Newcastle-on-Tyne, says:—"I find it an excellent tonic in cases of mental anxiety induced by over-study in clergymen and others."

Descriptive Pamphlet post free on application to

Rumford Chemical Works, Providence, R.I., U.S.A.

Beware of Substitutes and Imitations.

G. N. S.—You are wrong to wash your head every day; that is the source of your hair-weakness. Wash it once every ten days, and use the Eau Lodois of the French Hygienic Company (advertised in our pages), as a suitable application. Employ soft brushes only, and avoid all hard and small combs. If these means fail, write again.

Tangerine.—We recommend you to consult a good surgeon in Glasgow. We can send you address of such if required. There may be nothing seriously wrong; but if you say your symptoms arose a month after your exposure to infection, your case may be more serious than you imagine; and only a personal consultation can decide this for you. If the matter was as simple as you indicate, the symptoms should have appeared in a few days after the infection.

Baillieston.—Apply to your lips at night a little Vinolia, to be had of any good druggist in your city, or of Messrs. Roberts & Co., 76, New Bond-street, London, W., and attend to your digestion, which is probably the primary cause of your trouble. See and follow advice given to "Star" in Health of last week.

Enoch Wallace.—1. See advertisements of the Oat Flour in Health. 2. There is nothing better; but Neave's Food or Ridge's Food might be tried as a change.

Hermes.—Read the pamphlet, "A Lecture to Young Men," post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W., and you will find full information therein. The disease you name is very rare, but is one much made of by quacks for their own purposes.

H. H. Ayers.—Apply to Messrs. Pulvermacher, 194, Regent-street, London, W., and take their advice regarding the use of one of their galvanic belts. In addition to this treatment, take Inman's Syrup of the Hypophosphites (advertised in our pages)—a teaspoonful in a wineglass of water, twice daily, after your meals. A cold sponge-bath every morning is to be taken also, and plenty of out-door exercise. Let us hear in a few weeks how this treatment suits your case.

Sexagens.—A remedy for flatulence and offensive breath, arising from digestive disturbance, is as follows:—Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals.

Locksley Hall.—Use a pair of very soft brushes; use no hard brushes or combs. Castor oil, four drachms; almond oil, twenty-eight drachms; glycerine, twelve drachms; rectified spirits, four drachms; Jockey Club perfume, eight drachms. Mix. Label: "Rub a little into the roots of the hair each morning."

M. A. X.—To make an ointment for your case try the following: Gall and opium ointment, to be had at any druggist's; or acid tannic, twenty grains; bismuth subnit., one drachm; pulv. opii., ten grains; paraffin mollis, one ounce. Mix, and label, "For external use; to be applied on a piece of lint."

Seacole.—Try Woodward's Gripe Water. It is perfectly safe, and will relieve the child's symptoms.

A. X. F.—Read the pamphlet, "A Lecture to Young Men" (post free, 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.).

E. Somers.—A hair lotion adapted to promote growth is made as follows: Tincture of nux vomica, three drachms; distilled vinegar, two and a half ounces; tincture of capsicum, one drachm; tincture of cantharides, six drachms; spirits of rosemary, one ounce; rose water to make up six ounces. Rub a little into the roots of the hair each morning.

E. Davis.—The trusses you name are made by the Medical Battery Company, 52, Oxford-street, London, W.

APPREHENSIVE NERVOUSNESS.

Debility, Rheumatism, Gout, Sciatica, Torpid Liver, Kidney Disorders, and every form of weakness may be speedily cured by wearing

HARNESS' ELECTROPATHIC BELT.

It generates a mild continuous current of Electricity.

Produces no Shock or Discomfort whatever. Testimonials, Pamphlet and Advice free, personally or by letter.

Write at once to **Mr. C. B. Harness,** Consulting Electrician, **MEDICAL BATTERY Co. Ltd.**

52, OXFORD ST. LONDON, W.

(Corner of Rathbone Place.)

MILK

THE LANCET says:—"A very interesting and valuable preparation."

BRITISH MEDICAL says:—"The Preparation is sure to be appreciated."

THE MEDICAL PRESS says:—"A milk which is with difficulty distinguished from fresh cow's milk."

HEALTH says:—"A milk which cannot but commend itself to everyone who can enjoy pure, rich milk."

UNSWEETENED OR SWEETENED.

PREPARED BY

IN THE SWISS MILK CO.,

ST. GALL, SWITZERLAND.

THE CHEAPEST, PUREST, AND MOST NUTRITIOUS

Of ALL similar productions.

POWDER!

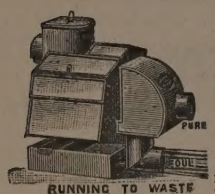
LONDON OFFICE: 61, MARK-LANE, E.C.

Telegraphic Address—"LAWINSKI, LONDON."

SUMMER TOURS in SCOTLAND.

GLASGOW AND THE HIGHLANDS
(Royal Route viâ Crinan and Caledonian Canals).—ROYAL MAIL STEAMER COLUMBA or IONA, with passengers only, sails from Glasgow daily at 7 a.m., from Greenock at 8.50 a.m.; Princes' Pier, 9 a.m.; and Dunoon, 9.35 a.m., in connection with Express Trains from London and the South, for Oban, Fort William, Inverness, Lochawe, Skye, Gairloch, Staffa, Iona, Glencoe, Islay, Stornoway, &c. Official Guide, 3d.; Illustrated, 6d. and 1s. Time Bill with Map and Fares free from the owner, DAVID MACBRAYNE, 119, Hope-street, Glasgow.

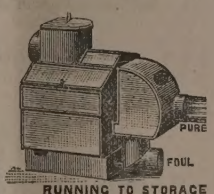
SILVER MEDAL, Health Exhibition, 1884, and Medal of Sanitary Institute, 1883.



RUNNING TO WASTE

THE
Rain Water Separator

Prevents the first portion of the rainfall passing into the storing tank. It cants and stores the water when the roof has been washed by the rain.



RUNNING TO STORAGE

PRICE FROM £2 15s. to £6 5s.

C. G. ROBERTS, Haslemere, Surrey.

ESTABLISHED 1825.

NEAVE'S FOOD FOR INFANTS, INVALIDS, AND THE AGED.

BEST AND CHEAPEST.

COCA LEAF
PREPARATIONS:

COCA TABLETS.
Containing Borax, to promote action on the Throat and the Vocal Cords. 2/6 per box.

COCA LOZENGES.
Without the Borax, for persons to whom its flavour would not be agreeable. 2/6 per Box.

COCA ELIXIR.
For making COCA Wine, the dose being 15 to 20 drops to the wineglass; can be taken in any fluid. 3/- per Bottle.

COCA TEA.
COCA, in combination with selected Teas; tonic, invigorating, and delicious. 4/- per lb.

These preparations may be obtained of all Chemists and Grocers. An Explanatory and Historical Pamphlet, showing the uses of the COCA LEAF, sent on application to the Sole Proprietors—

THE FRENCH HYGIENIC SOCIETY OF LONDON, 6, Conduit-street, Regent-st., W.

THE FIFTH EDITION NOW READY.

A
LECTURE TO YOUNG MEN
ON
"Purity of Life and the Preservation of Health."
BY A GRADUATE.

A complete Refutation of Quackery and a safe and reliable Guide, from the Medical standpoint, to all Young Men. Every Youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense.

PRICE ONE SHILLING, or post-free 1s. 1d., from
HENRY RENSHAW, Medical Publisher, 356, Strand, London, W.C.

A WONDERFUL MEDICINE.
BEECHAM'S PILLS

ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

WORTH A GUINEA A BOX.

For females of all ages these Pills are invaluable, as a few doses of them carry off all humours, and bring about all that is required. No female should be without them. There is no medicine to be found equal to Beecham's Pills for removing any obstruction or irregularity of the system. If taken according to the directions given with each box they will soon restore females of all ages to sound and robust health. This has been proved by thousands who have tried them, and found the benefits which are ensured by their use.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like magic, and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long lost complexion, bring back the keen edge of appetite, and arouse into action with the rosebud of health the whole physical energy of the human frame. These are FACTS testified continually by members of all classes of society; and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS *have the Largest Sale of any Patent Medicine in the world.*

Prepared only and Sold Wholesale and Retail by the proprietor, THOMAS BEECHAM, St. Helens, Lancashire, in boxes at 1s. 1½d. and 2s. 9d. each.

Sold by all Druggists and Patent Medicine Dealers everywhere.

N.B.—Full directions are given with each box.

ESTABLISHED 1870.

Makers of all kinds of
FILTERS
FOR
DOMESTIC AND MANUFACTORY PURPOSES.

J. HALLIDAY & CO.,
WATER-STREET, ASHLEY LANE, MANCHESTER.

ONE BOX
OF
CLARKE'S B41 PILLS
IS WARRANTED TO CURE

All ailments of the Urinary Organs (acquired or constitutional), Gravel, and Pains in the Back.

GUARANTEED FREE FROM MERCURY.

Sold in Boxes, 4s. 6d each, by all Chemists and Patent Medicine Vendors throughout the World; or sent to any address for sixty stamps by the Makers,

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

Wholesale Agents: BARCLAY & SONS, London, and all the Wholesale Houses.

VAN HOUTEN'S COCOA

EASILY DIGESTED—**PURE**—SOLUBLE—MADE INSTANTLY.

Incomparably THE BEST & MOST ECONOMICAL.

Very strong and nutritious,
THIS Cocoa is cheaper and more satisfying than tea.

"Admirable," "flavour perfect," "& so pure." } BRITISH MEDICAL JOURNAL. — "Delicate aroma," "pure & unmixed," "goes a long way." } LANCET.

"Its purity is beyond question." "Once used, always used."—HEALTH.

SAMPLE TINS GRATIS—through your Grocer or Chemist.

NOT FARINACEOUS. **MELLIN'S FOOD.**

MELLIN'S FOOD for INFANTS and INVALIDS.

An artificial substitute for Mother's Milk for Infants, and a Perfect Food for Invalids. This Food is prepared from the soluble extracts of cereal grains, and, unlike the "Farinaceous Foods," is perfectly FREE FROM STARCH. It is a well known physiological fact that starchy substances cannot be digested by young children, the natural food of an infant—Mother's Milk—contains no starch, no provision is made by nature, therefore, in the case of infants for the digestion of that body. The ferments of saliva and pancreatic juice, which later become the actual agents in converting starch into grape sugar, are wanting. MELLIN'S FOOD, being free from starch, and rich in soluble Carbohydrates, Albuminoids, Phosphates, Potash, and other blood salts, forms a perfect food for young children.

MELLIN'S
LACTO-GLYCOSE
OR
MILK FOOD.

Price 2s. and 3s. per Bottle.

In this preparation Milk is incorporated with the Food in the process of manufacture, thus making it specially suitable where a difficulty exists in procuring fresh cows' milk, as, for instance, on board ship and in hot climates.

Sample and Prospectus on application to the Inventor and Manufacturer,

G. MELLIN, Marlboro' Works, Peckham, S.E.

Printed for the Proprietor by HENDERSON & SPALDING, at 3 and 5, Marylebone-lane, Oxford-street, in the Parish of Marylebone, in the County of Middlesex, and Published by ALEXANDER P. WATT, at No. 2, Paternoster-square, London, E.C.